SOAP and SANITARY CHEMICALS

"THE SECRET OF SUCCESS
IS CONSTANCY TO PURPOSE"

D&O

ESTABLISHED 1798

SERVING THE PERFUME AND COSMETIC INDUSTRY

for nearly a Century and a Half

Dodge & Olcott, INC.

180 VARICK STREET, NEW YORK 14, N. Y.

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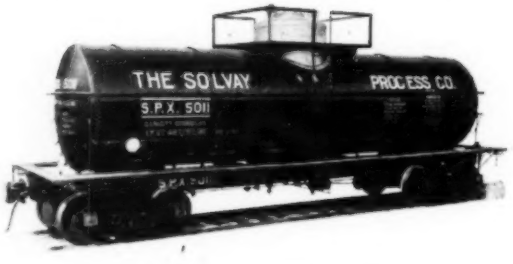
FOR QUALITY PRODUCTS

Specify

SOLVAY

TRADE MARK REG. U. S. PAT. OFF.

CAUSTIC POTASH



49-50% LIQUID in tank cars

45% LIQUID in drums

Quality soaps and sanitary chemicals require quality caustic potash in their processing—because only a potash low in impurities better meets the exacting specifications for clear, stable products.

Solvay Caustic Potash liquid is low in turbidity. Shipped in tank cars, Solvay Caustic Potash liquid contains 49-50% Potassium Hydroxide. In drums, this clear liquor contains 45% KOH.

Whether shipped in tank cars or drums, Solvay offers prompt delivery always.

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Alkalies and Chemical Products Manufactured by The Solvay Process Company

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BRANCH SALES OFFICES:

Boston • Charlotte • Chicago • Cincinnati • Cleveland • Detroit
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2. IT POLISHES!

3. IT SEALS!

All in One Operation!

CLEENAX

WAX SOAP CONCENTRATE

Get ALL THREE with *one* labor cost . . . CLEENAX *cleans*, *polishes* and *seals* in one operation. And since 95% of maintenance expense is labor cost, it's easy to see how Fuld's CLEENAX saves money! CLEENAX action reduces the number of cleanings required . . . again saving labor cost! That's why CLEENAX is the demand cleaner among maintenance men who watch their expenses carefully! CLEENAX triple-action removes dirt and accumulated wax at the same time it applies fresh wax to the surface. Pores are sealed. Will not injure paint or surface on walls, woodwork or floors. For all resilient floors, terrazzo and painted surfaces. Available in plain or pine odor, in drums, half-drums, quarter-drums and 5 gallon containers. Approved by the Rubber Manufacturers' Association for rubber floors. Write for sample.

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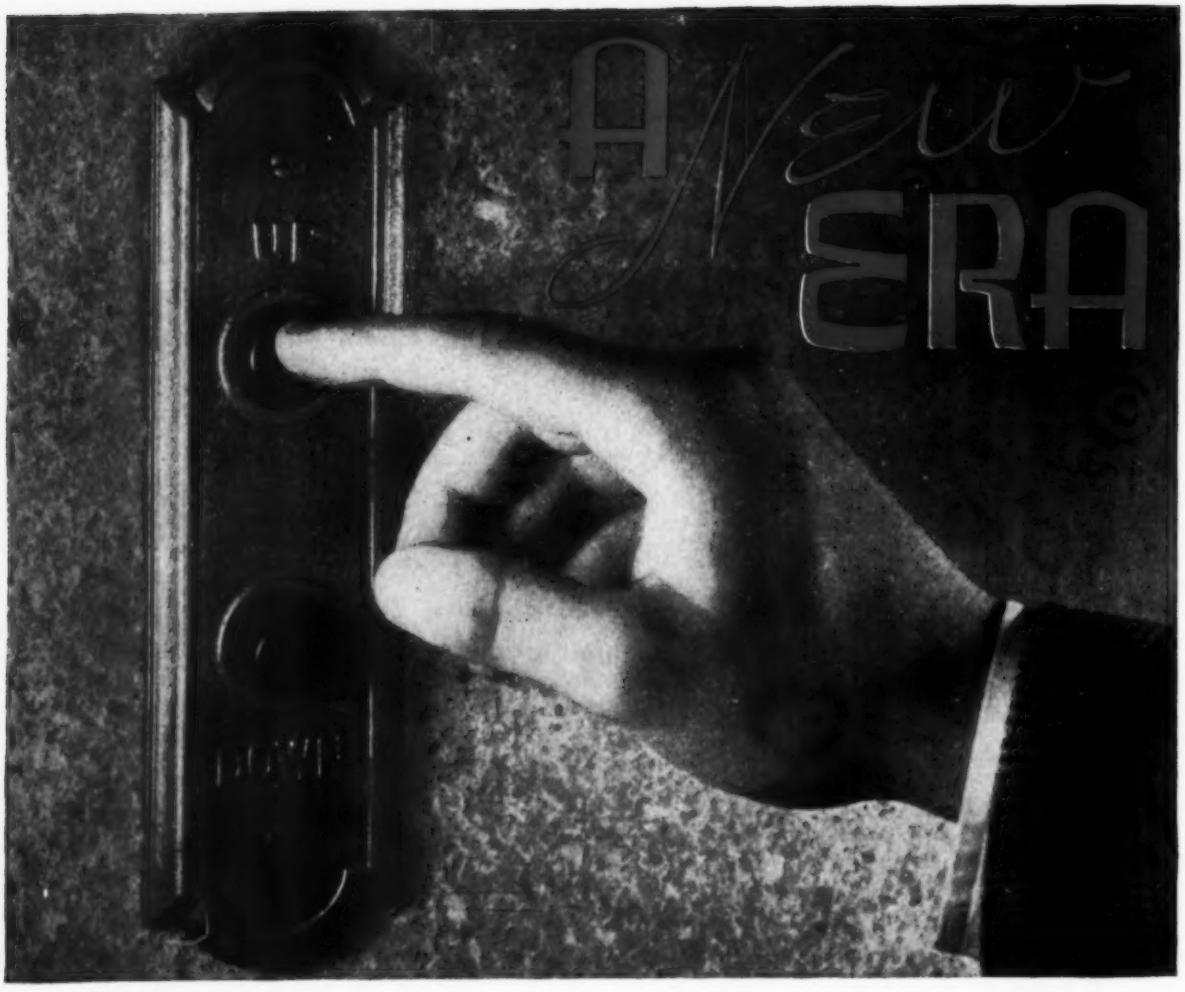
2444 East 8th Street, Los Angeles 21, Calif.
New York Sales Office: 55 West 42nd Street

Fuld Brothers

Liquid Soaps, Floor Seals, Floor Treatments, Deodorant Blocks, Liquid Deodorants, Plumbing Specialties, Special Cleaners, Self-Polishing Waxes, Powdered Waxes, Oil Soaps, Liquid Cleaners, Disinfectants, Insecticides, Metal Polishes, Furniture Polishes, Deodorant Block Holders, Soap Dispensers.

B & Z Library



A new era is before us. We either go up or down from this point. Which direction you go depends largely upon the ingenuity of our research laboratories in every field. Our own production problems have been severe during the war years. We have done our utmost to supply our customers with the materials they wanted. We have achieved a good record in this regard.

Nevertheless our chief effort has been in our research laboratories. Many products which will be well known in the industry in future years have been developed by us. These products are not as yet in commercial production but samples are ready for you in order that you may examine the products which will affect our industry in the future.

Information in regard to these together with samples will be furnished on request on your firm's letterhead.

A preview of what is coming in the aromatics field is yours for the asking.

Aromatics Division

Aromatic Chemicals of Utmost Purity at Right Prices

GENERAL DRUG COMPANY

125 Barclay St., New York 7, N. Y.

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Volume XXI
Number 10
October, 1945

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YOUR LAUNDRY COMPOUNDS WORK BETTER, SELL BETTER

teamed up with QUADRAFOS

QUADRAFOS in your laundry compounds, whether alkalies or soaps, gives the laundry operator just what *he wants.*

- **Fine Washing**—QUADRAFOS *in your compounds will produce a bang-up job of high quality washing with clearer colors, snappier whites.*
- **Efficient Washing**—QUADRAFOS *in your compounds will turn out more work by cutting rinsing time, pepping up soil removal, streamlining the whole washing formula.*
- **Economical Washing**—QUADRAFOS *in your compounds will conserve hot water, softener capacity, time and soap.*

When you use QUADRAFOS (Sodium Tetraphosphate-$Na_6P_4O_{13}$) in your laundry compounds you give the laundry operator what he wants and you get the increase in sales *you want.* Rapidly soluble, effective in hot or cold water, compatible with alkalies, soaps, wetting agents, QUADRAFOS brings to the laundering of all fabrics the benefits of its remarkable properties—detergency, sequestration, and water conditioning.

QUADRAFOS IS AVAILABLE NOW!

QUADRAFOS GRANULAR is a white, free-flowing powder. It is readily soluble and sized for convenient compounding with many detergent alkalies . . . 95% passes a 14-mesh screen. QUADRAFOS 30—a white, free-flowing powder, is very rapidly soluble and is preferred for finely powdered products . . . 95% passes a 30-mesh screen.

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Consult our Technical Service Department any time on how to use QUADRAFOS in your compounds. Send for Industrial Bulletin No. 65.

Write Technical Service Department, Rumford Chemical Works, 19 Newman Avenue, Rumford 16, Rhode Island.

QUADRAFOS*

Manufacturers *REG. U. S. PAT. OFF.

RUMFORD CHEMICAL WORKS

19 NEWMAN AVE., RUMFORD 16, RHODE ISLAND

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DISINFECTANTS

Buy **HYSAN CONTROLLED QUALITY**

4 Hysan Leaders

1. **Victory Disinfectant...** a new, more potent germ killer with a gentle pine forest aroma.

2. **Duramene...** an all-purpose germicide, antiseptic, deodorant, fungicide and disinfectant. Odorless, so specified where other preparations are banned.

3. **Pergerm...** the perfumed disinfectant. Destroys noxious odors, leaves a clean floral fragrance.

4. **Mintene...** Hysan's newest disinfectant. Refreshing mint aroma forms milk-white emulsion in water. (Phenol co-efficient 5)

★ *Standard Disinfectants* **Manufactured under rigid chemical and bacteriological controls.**

PINE OIL DISINFECTANT . . . Phenol co-efficients 3, 4, 5
COAL TAR DISINFECTANT . . . Phenol co-efficients 2 to 20
CRESOL COMPOUND U.S.P. CRESOL COMPOUND TECH.

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Hysan

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Endeavor and achievement go hand-in-hand at Monsanto. That's why no other letter in chemical endeavor symbolizes more than Monsanto's famous letter M. That's why Monsanto products are unexcelled in quality. Industry keeps finding this out . . . Monsanto keeps proving it! MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Seattle, Montreal, Toronto.

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At all times sodium silicates are valuable ingredients because they improve the detergent action of the soap and do so at an economical cost. The "big five" of detergency—wetting, emulsifying, dissolving power, suspension and prevention of redeposition of dirt—are functions regularly contributed by the silicates to household and industrial soaps and cleansers.

Now, when some soap making raw materials are short and substitutions, such as low titre fats, must be made, silicates are even more advantageous, for they improve the body and firmness of soaps.

Toilet soaps also benefit by the use of silicates, where the addition of one percent or less prevents fats from becoming rancid.

And for liquid soaps in which sodium silicate may be objectionable, the soap manufacturer turns to our potassium silicate (trade name Kasil).

Now and postwar, know and plan with the PQ versatile soluble silicates.

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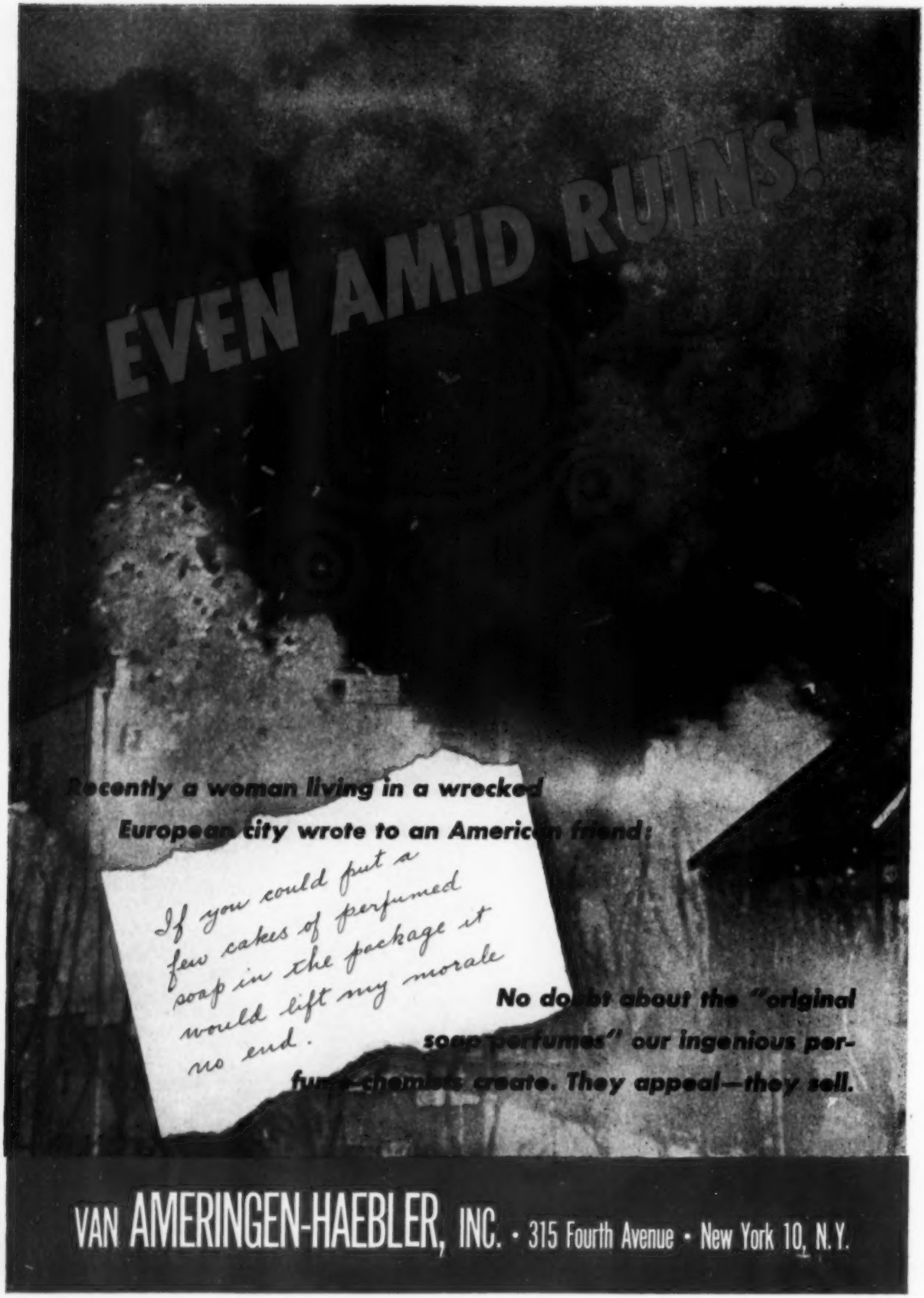
PQ SILICATES OF SODA


EVEN AMID RUINS!
Recently a woman living in a wrecked European city wrote to an American friend:
If you could put a few cakes of perfumed soap in the package it would lift my morale no end.
No doubt about the "original soap perfumes" our ingenious perfumer-chemists create. They appeal—they sell.
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Alkalies and Phosphates . . . Westvaco alone provides a single dependable source of supply for all the important chemicals used by soap and sanitary chemical manufacturers. For instance:

Westvaco CHEMICALS

ALKALIES

CAUSTIC SODA
Liquid • Solid • Flake

CAUSTIC POTASH
Liquid • Solid • Flake

PHOSPHATES

TETRASODIUM PYROPHOSPHATE (TSPP)
SODIUM TRIPOLYPHOSPHATE
DISODIUM PHOSPHATE • TRI-SODIUM PHOSPHATE

FOSKLOR (T. M. Reg.)

New ready-to-use mixture of Sodium Hypochlorite and Trisodium Phosphate. Attractively packaged, attractively priced. Write for details today!

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CARBON TETRACHLORIDE
FIRE EXTINGUISHER FLUID
TRICHLORETHYLENE • PERCHLORETHYLENE
ETHYLENE DICHLORIDE

We are now scheduling 1946 production and will welcome the opportunity to discuss our ability to serve you from strategically-located stocks.

And **FOR FUMIGATORS**—Westvaco is a new source of Methyl Bromide. Write for details.

We solicit inquiries. WIRE, WRITE OR PHONE.

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With the ultimate opening of the trade channels of the world to a new peacetime commerce, the variety of perfume and cosmetic materials will be greatly increased. Moreover, many special constituents, developed to meet wartime needs and shortages, will augment the time-proven materials that will return with the easing of restrictions. Here is a situation that offers hidden opportunities to alert perfumers and cosmetic manufacturers seeking to effectively *improve* and *expand* their lines. Givaudan offers experienced knowledge and specialized skill in helping to make the most of these opportunities. May we help you plan new and better postwar lines?

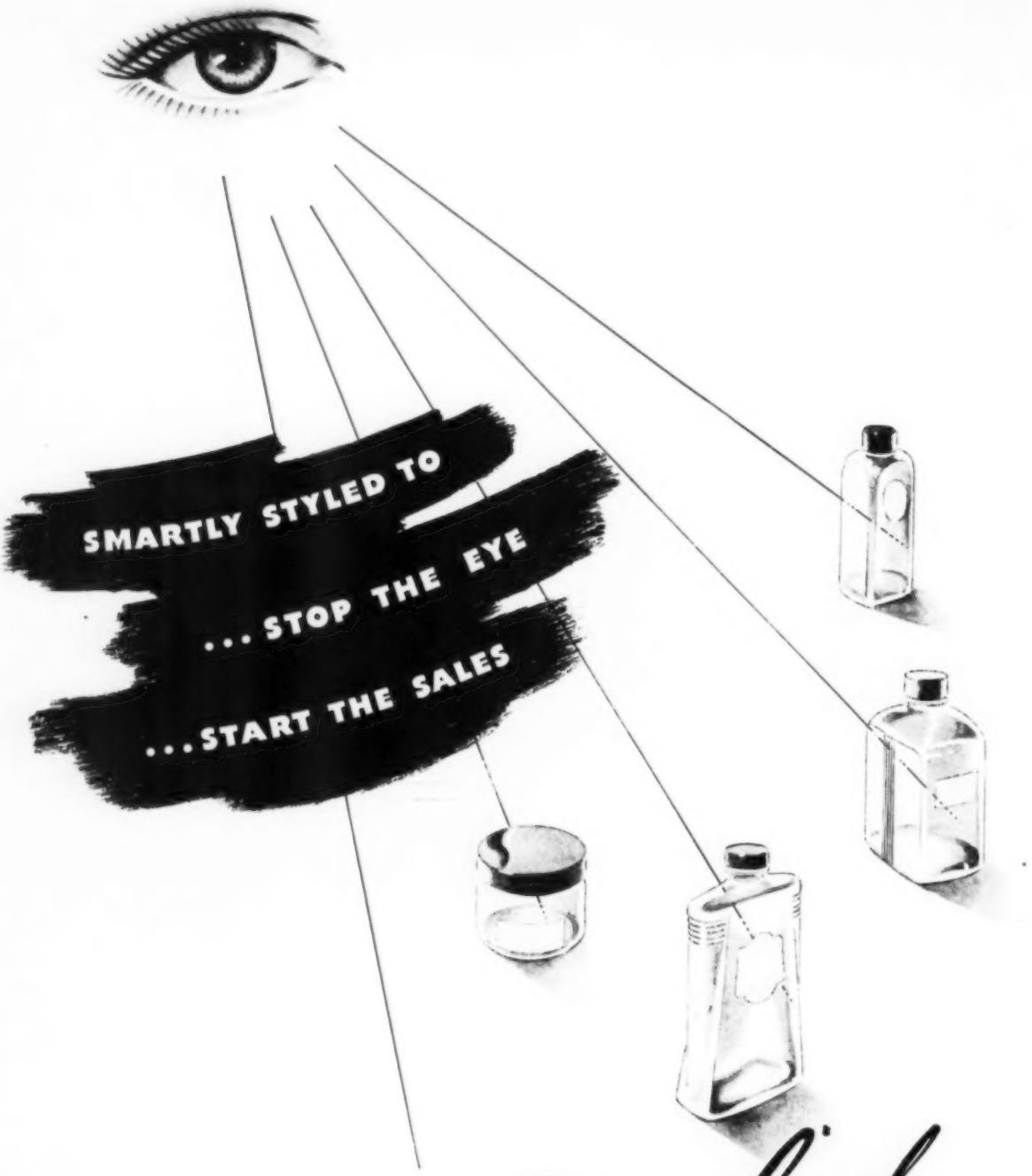
"BUY WISELY...BUY GIVAUDAN"

Givaudan-Delawanna INC.

330 WEST 42nd STREET • NEW YORK 18, N. Y.

hidden opportunities

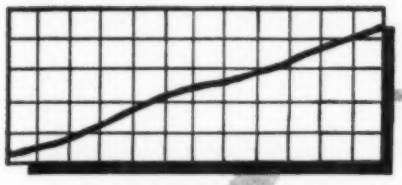
WITH CLUES BY *Givaudan*



PACK TO ATTRACT IN *Maryland* GLASS

MARYLAND GLASS CORPORATION, BALTIMORE 30 . . . 270 BROADWAY, NEW YORK 7 . . . BERMAN BROS., INC., 1501 S. LAFLIN ST., CHICAGO 8 . . . J. E. McLAUGHLIN, 401 LOCK ST., CINN. 2 . . . ALLER TODD, 1224 UNION AVE., KANSAS CITY 7 . . . S. WALTER SCOTT, 608 McCALL BLDG., MEMPHIS 3 . . . H. A. BAUMSTARK, 4030 CHOUTEAU AVE., ST. LOUIS 10 . . . OWENS-ILLINOIS GLASS CO., PACIFIC COAST DIV., 135 STOCKTON ST., SAN FRANCISCO 19.

There Are No Dips in the Hooker Quality Curve...



When chemicals are scarce, the quality of the chemicals that are available assumes a greater importance. With Hooker, high quality is a constant, not subject to variations in accordance with supply.

That's why so many in the soaps and sanitary chemicals field who have been securing their chemicals from Hooker are able to maintain their own high quality standards without difficulty. Because Hooker makes over one hundred chemicals, all of consistent and dependable high quality, many of your needs in the soaps and sanitary chemicals field can be supplied from one reliable source. Whether you need solvents, deodorizers, antiseptics, chlorinating agents, insecticides or intermediates, look to Hooker first.

A few of the Hooker chemicals are listed below. More comprehensive information and samples are available when requested on your letterhead. Send also for the 1945 edition of Hooker General Products List. It gives brief, pertinent information on all Hooker Chemicals.

Product (Chemical Formula Molecular Weight)	*Description* (All Specific Gravities at 15.5°/15.5°C)	*Suggested Uses*
Benzoate of Soda—USP C_6H_5COONa; 144.0	White, odorless, crystalline solid in flake or powdered form.	Antiseptic in pharmaceutical and medicinal preparations, in tooth pastes and powders.
Benzoic Acid—USP C_6H_5COOH; 122.1	White, odorless, crystalline solid in powdered form.	Ingredient of cosmetic creams, lotions, and other pharmaceutical preparations; antiseptics, dentifrices, dyestuff intermediates. Manufacture perfumes and pharmaceuticals.
Benzoyl Chloride (Benzenecarbonyl Chloride) C_6H_5COCl; 140.5	Water clear liquid soluble in ether; reacts with alcohol and water. Sp. Gr. 1.219 ± .003. Boiling Point 198°C. Freezing Point, Min. −0.9°C.	Highly active source of benzoyl group. Manufacture of benzophenone, benzyl benzoates, synthetic perfumes, dyes and pharmaceuticals.
Cyclohexanol (Hexahydrophenol) $C_6H_{11}OH$; 100.1	Clear, colorless liquid with pleasant aromatic odor. Sp. Gr. 0.947. Boiling range: High Grade, 158° to 162°C; Tech. Grade, 155° to 165°C.	In manufacture of disinfectants, germicides and insecticides, perfumes in soaps, solvent.
Methyl Benzoate (Niobe Oil) $C_6H_5COOCH_3$; 136.1	Clear, colorless liquid with odor resembling oil of wintergreen. Sp. Gr. 1.0930. Boiling Range 2°C Max. including 199°C.	Deodorizing material for soaps and in manufacture of perfumes.
Methyl Cyclohexanol (Hexahydro Cresol) $CH_3C_6H_{10}OH$; 114.1	Slightly viscous straw colored, neutral liquid which becomes glasslike when cooled below room temperatures. A mixture of ortho-, meta-, and para-isomers. Sp. Gr. 0.924 ± .008. Boiling Range 155° to 180°C.	Perfume in soaps and to incorporate solvents and phenolic insecticides; solvent.
Orthodichlorbenzene (1:2 Dichlorbenzene) $C_6H_4Cl_2$; 147	Clear, colorless liquid. Sp. Gr. 1.310 ± .005. Boiling range 10°C Max. including 180°C.	Insecticide, solvent for natural and synthetic gums, resins, tars, grease, oil, fats. Ingredient of metal polishes, paint and varnish removers. Insecticide for: termites, powderpost beetles, flies, bed bugs, roaches, wood borers, midges, barnacles, etc. Manufacture of pyrocatechin dye intermediates, synthetic organics.
Sulfur Dichloride SCl_2; 103	Dark brown or reddish liquid. Sp. Gr. 1.638 ± .005. Decomposes above 40°C. 66% Min. Chlorine content.	Chlorinating agent, in manufacture of organic acid anhydrides and in organic syntheses.
Sulfur Monochloride S_2Cl_2; 135	Yellow to slightly reddish liquid. Sp. Gr. 1.690 ± .005. Boiling Point 138°C. 50% Min. Chlorine content.	Manufacture of insecticides, linseed oil substitutes, dye intermediates, pharmaceuticals, organic acid chlorides. Solvent for sulfur.

HOOKER CHEMICALS

B468

ARMY E NAVY

HOOKER ELECTROCHEMICAL COMPANY

Buffalo Ave. and Union St. Niagara Falls, New York

New York, N. Y. • Wilmington, Calif. • Tacoma, Wash.

Caustic Soda **Paradichlorbenzene** **Muriatic Acid** **Chlorine**
Bleaching Powder **Sodium Sulfhydrate** **Ferric Chloride** **Sodium Sulfide**

GIVE YOUR PRODUCT ROOM TO GROW

THE *Institutional Market*
SPENDS
$45,000,000★
ANNUALLY
for WAXES, DISINFECTANTS, SOAPS, FLOOR FINISHES, CLEANING COMPOUNDS, INSECTICIDES, SANITARY CHEMICALS

● INSTITUTIONS Magazine is the only publication through which you can reach all related divisions of the Institutional field. If your present or contemplated products have an application to this field, your advertising messages in the columns of INSTITUTIONS Magazine will gain for them the kind of acceptance they must have to share in the huge Institutional Market.

★ **The mass-housing, mass-feeding institutions of America are a *mass market* for waxes, disinfectants, soaps, floor finishes, cleaning compounds, insecticides and sanitary chemicals. The Institutional field is a *concentrated* market with each unit buying and consuming in *volume* . . . with all units spending over $45,000,000 annually for these items alone. If your product has application to this field with its concentrated buying power, investigate the opportunities it offers for volume sales . . . Ask for a free copy of *"Your Institutional Market."* Write to INSTITUTIONS Magazine, 1900 Prairie Avenue, Chicago 16, Illinois.**

Your mass-housing and mass-feeding market is made up of the following institutions which constitute the reader audience of INSTITUTIONS Magazine:

- Hotels
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- Restaurants
- Industrial Cafeterias
- Colleges
- Public Institutions
- YMCA's and YWCA's
- Railway Systems
- Steamship Lines
- Public Buildings
- Other Institutions

and . . . for the duration of the war—in addition to its regular circulation, INSTITUTIONS Magazine is being sent to buyers and specifiers of mass-housing and mass-feeding products for those engaged in the war effort.

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Frozen Cooked Foods Seen as Profitable
Design for Model Food Service Room Given
How to Distinguish Between Fabrics
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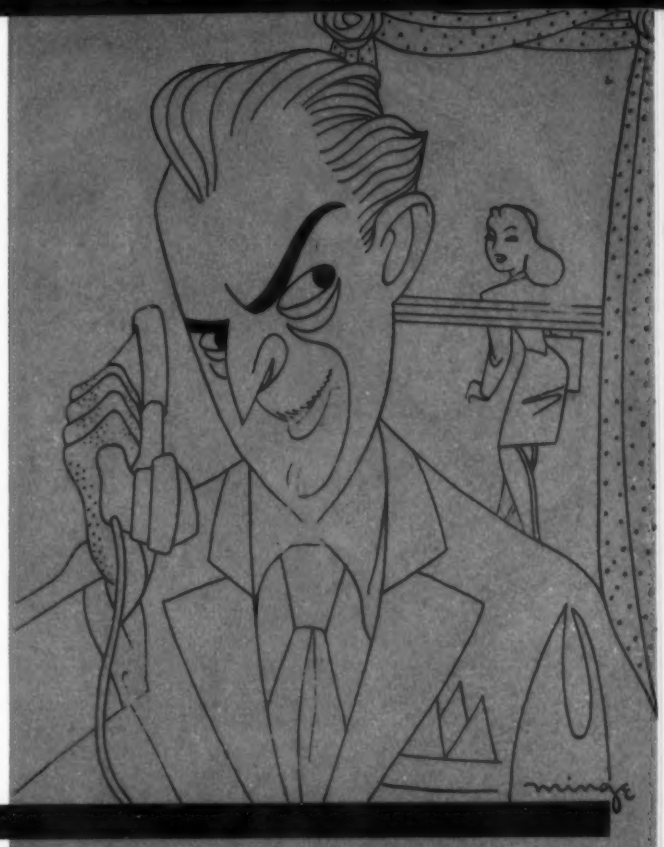
MAGAZINE
PLACE POSTWAR ORDERS NOW!
INSTITUTIONS HAVE RECONVERSION TASK TOO, SAYS ANDREWS
War Food Head Says Surpluses Won't Be Great
Design for Postwar Food Service
IMMEDIATE ACTION CAN ASSURE FASTER V-E DAY DELIVERIES

CONSULT YOUR ADVERTISING AGENCY

F A M O U S

Caustic Comments

When invited to attend a dinner party given by a snobbish socialite, the late John Barrymore replied in caustic tones, "I'm frightfully sorry I won't be able to come, Mrs. Bore. I have a previous engagement which I shall make just as soon as I possibly can!"



Dow

ONE OF MANY DOW CHEMICALS USED BY AMERICAN INDUSTRY

Caustic Soda

We have a *Caustic* Soda message also:
Dow is exceptionally well situated to supply industry with Caustic Soda and other heavy chemicals in the Dow tradition of service, reliability and product-quality. Three Dow plants—in California, Texas and Michigan—are strategically located to serve your needs, wherever you may be.

Dow Technical Advisory Service Available

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DOW

CHEMICALS
INDISPENSABLE TO INDUSTRY

Carlstadt Chemical Company

SUPERIOR
SULPHONATED
SYNTHETIC
DETERGENTS

CARAPOL POWDER

CARAPOL PASTE

CARAPOL LIQUID

WRITE OR
PHONE NOW

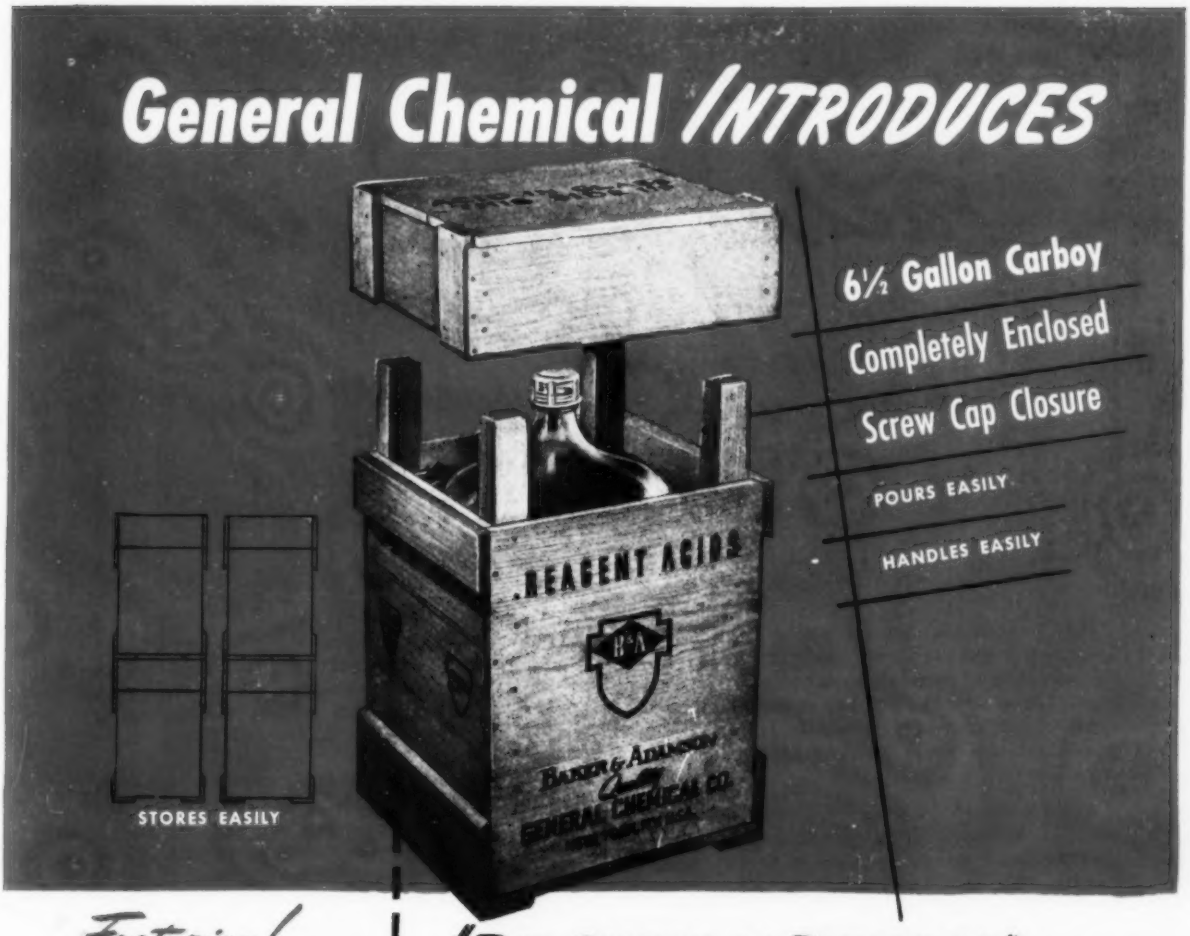
FOR SAMPLES
AND PRICES

CARLSTADT CHEMICAL COMPANY

CARLSTADT, NEW JERSEY

MANUFACTURERS OF SYNTHETIC ORGANIC CHEMICALS

General Chemical INTRODUCES



"THE CARBOY OF TOMORROW" Today!

For B & A Reagent Acids and Ammonia

Chemical packaging makes a significant advancement with the advent of the new 6½ gallon, screw-cap, completely boxed carboy . . . and General Chemical Company leads the way by pioneering this superior modern container for its Baker & Adamson Reagent Acids and Ammonia.

Here is a carboy that protects the high purity of B&A products and safeguards their quality for the user even under adverse conditions. Study its many special features. Note how they provide an ease of handling and storage impossible with ordinary carboys.

These are advantages industrial users of reagent acids, laboratories, colleges and others will welcome as the answer to their special requirements. You will want them, too . . . so . order B&A Reagent A. C. S. Acids and Ammonia in this new carboy *now*. Limited shipments soon to all points east of the Rockies.

Featuring!

- ✓ **"ONE-MAN" PACKAGE** Compact . . . saves labor . . . lower gross weights make possible *one-man* handling and storage—

	Gross
Sulfuric Acid	138 lbs.
Nitric Acid	113 lbs.
Hydrochloric Acid	102 lbs.
Ammonium Hydroxide	86 lbs.

- ✓ **"PURITY SEAL" COVER** Completely encloses bottle, keeps out dirt, prevents sunlight damage to pure acids.

- ✓ **POUR-CLEAN LIP** Superior pouring control . . . easier emptying into small containers.

- ✓ **SCREW-CAP CLOSURE** Added security in sealing, yet simpler opening and closing. Keeps bottle neck clean, protects acid from contamination.

- ✓ **SAVES STORAGE SPACE** Store *more* acid in *less space* . . . rectangular solid package with reinforcing corner posts adaptable to storage in solid tiers, or on pallets. Takes less room than commercial carboy with protruding neck.
- ✓ **"FULL VIEW"** Contents completely visible . . . acid level easily determined.
- ✓ **EXTRA STRENGTH BOTTLE** Designed for superior strength and uniformity.
- ✓ **RESISTANT COATING** Entire box weather-proofed for longer life and better appearance.

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GENERAL CHEMICAL COMPANY
FOR AMERICAN INDUSTRY

GENERAL CHEMICAL COMPANY
40 RECTOR STREET, NEW YORK 6, N. Y.

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Which of these Buying Factors do You Sell?

Superintendent? Dietitian? Housekeeper? Engineer? Directress of Nurses? Purchasing Agent? Maintenance Supervisor? Laundry Head? Pharmacist? Business Office Manager? Chef? Operating Room Supervisor? Maternity Room Supervisor?

The chances are you sell one of them in one hospital and another in the next. For in spite of the fact that all hospitals have one thing in common, as havens for the sick and injured, their management practices vary as widely as is the case in any industry where you sell your products or services.

At Hospital "A" a given department head may have full authority to purchase expendable supplies but may not be empowered to buy equipment or fixtures. At Hospital "B" all purchases for the same department may be cleared through a purchasing agent. Hospital "C" may follow a completely different procedure where the superintendent buys upon recommendation by the department head.

Thus the department head may vary in importance from cases where he has full authority to others where he has none. And this degree of authority may vary greatly for one product as compared with another.

For this reason advertising plays a very important part in selling to the hospital market. Properly conceived and carried deeply into the complex administrative structures of hospitals, it can sell those who influence as well as control buying. In a compact, concentrated market, where individual purchases are normally very large, such advertising can and does produce results greatly out of proportion to its cost.

HOSPITAL MANAGEMENT can take your story to all the people who influence purchases. Our balanced editorial program of "how to do it" articles and the outstanding news service of the field, produces readership which takes hospital people right to your story.

More than three-quarters of the hospitals where HOSPITAL MANAGEMENT is received route copies from one department head to another. And in articles, correspondence and display advertisements in each issue, we have urged even greater practice of this procedure so that our penetration into the market will be even greater.

Hundreds of advertisers have found this the ideal medium for increasing their sales in one of the greatest of markets. Ask for our circular giving the complete story about HOSPITAL MANAGEMENT, or better yet, have one of our representatives give you that story.

For Detailed Reference Data See THE MARKET DATA BOOK Business Publications Edition

Hospital Management

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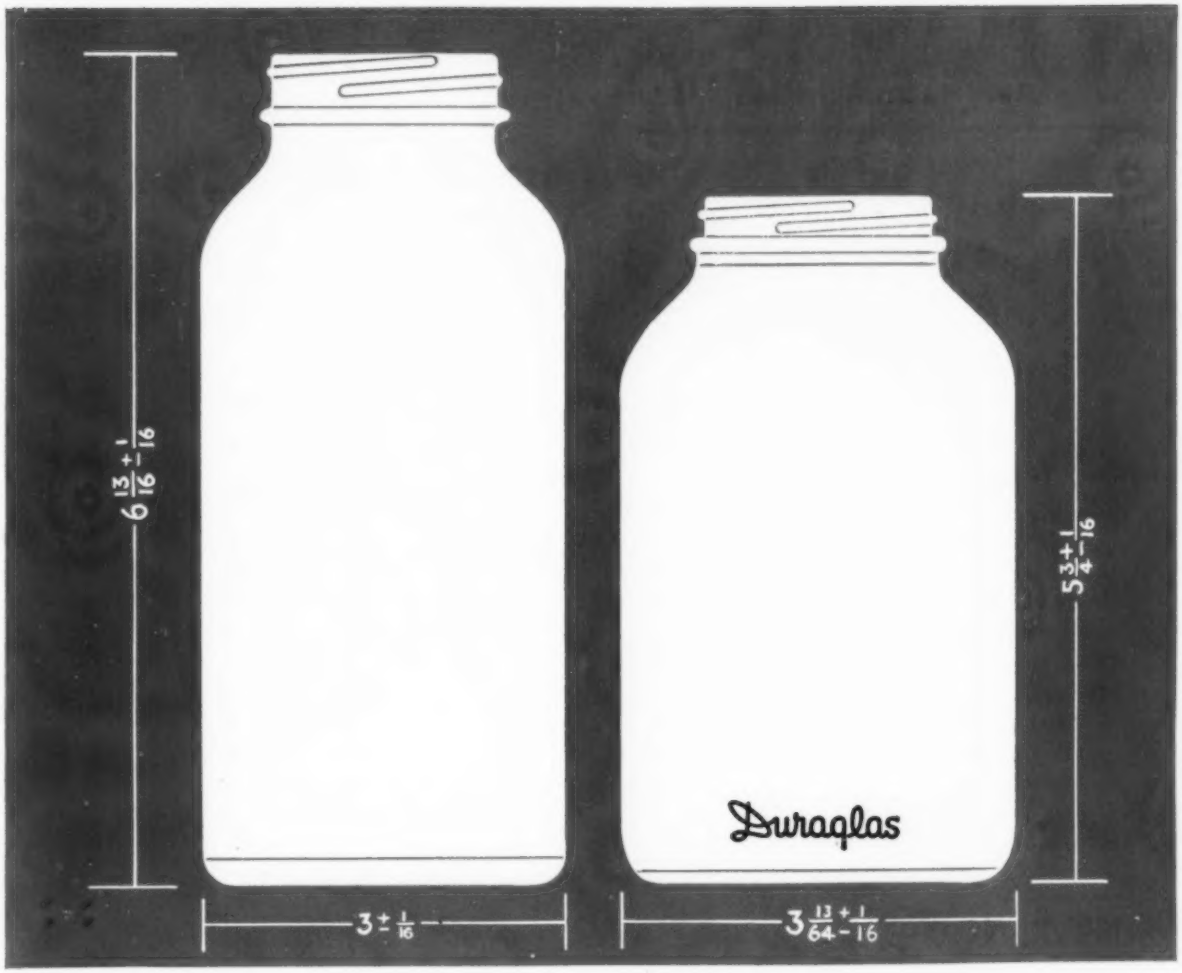

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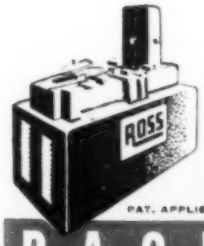

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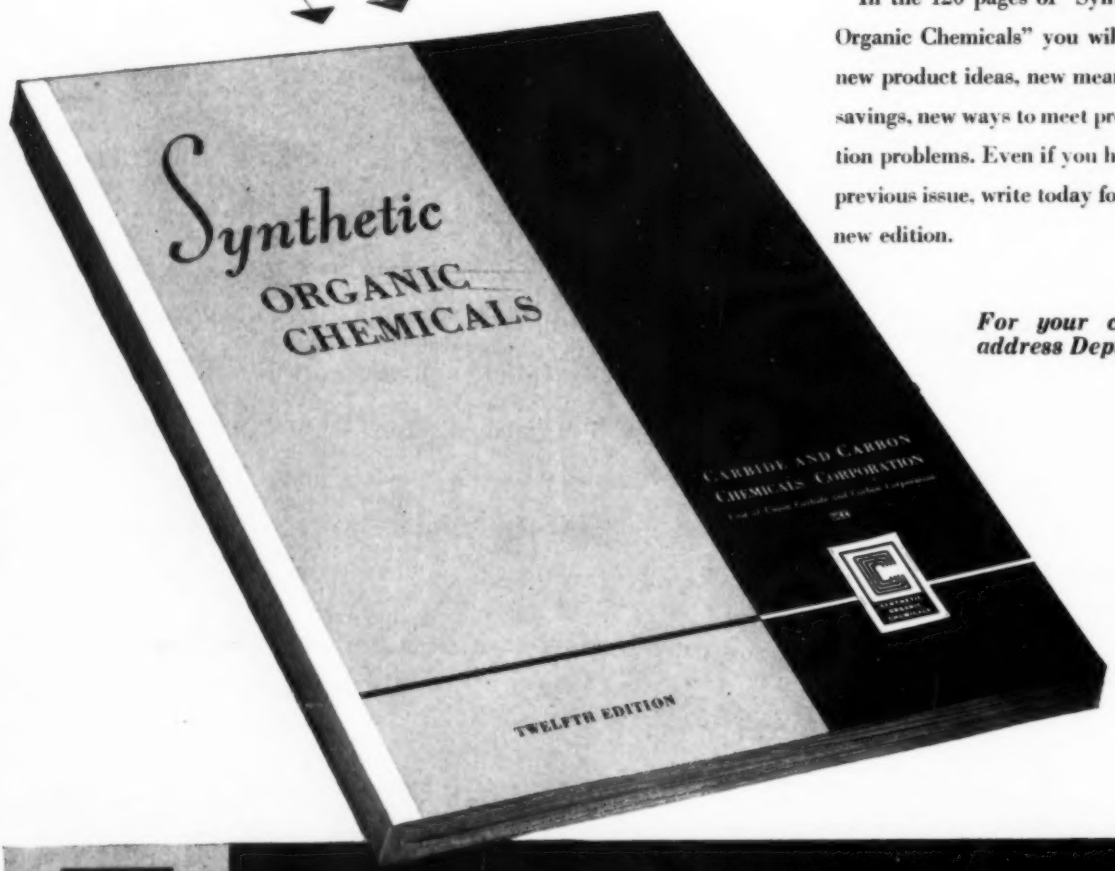

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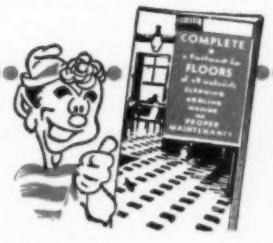

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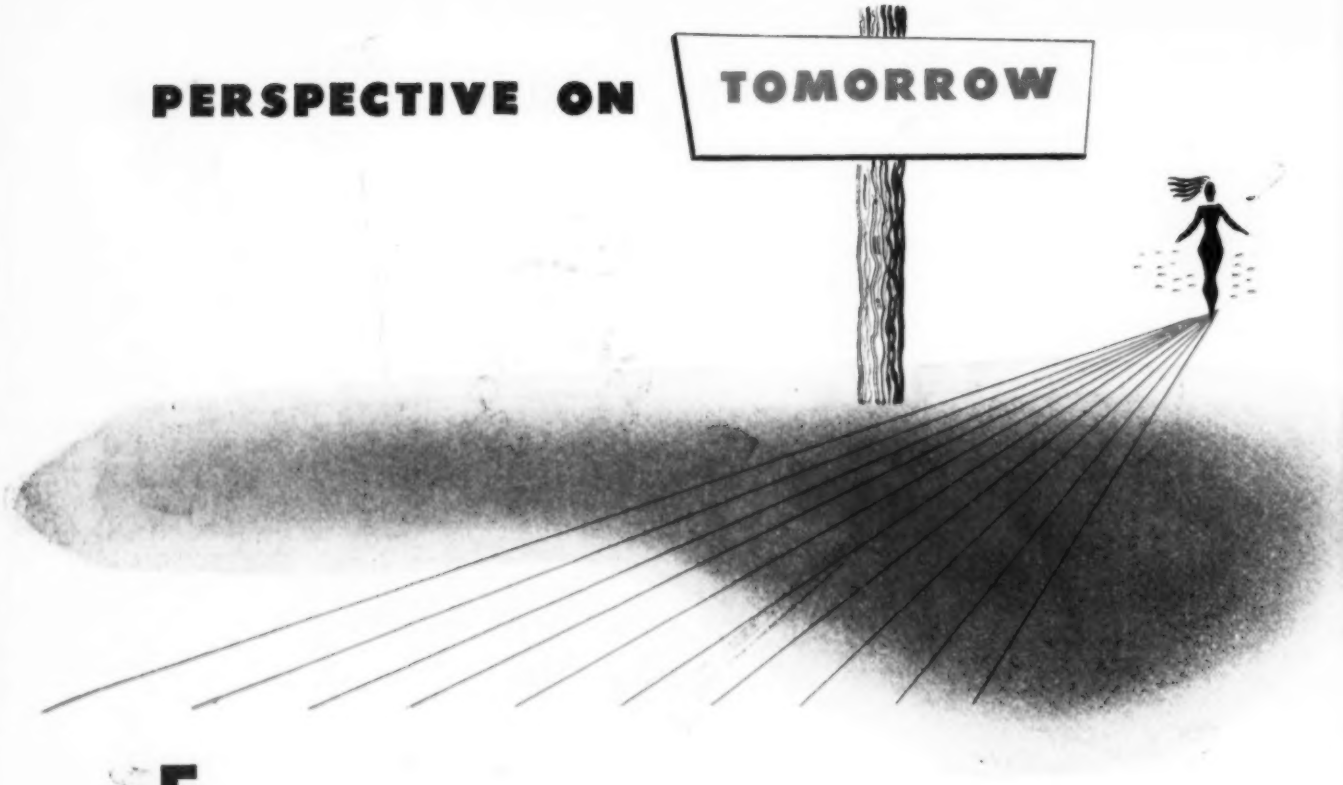

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For years Emery has manufactured Extra Elaines (Oleic Acids or Red Oils) to specifications designed to produce low-titre, free-rinsing, "wax-free" soaps for a variety of specific uses. Even now with fats in tight supply, the uniformity and stability of Emery's fatty acid products remain unchanged.

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Emery's Stearic Acids and Red Oils are refined and separated by special processes developed and engineered in Emery's Laboratories.

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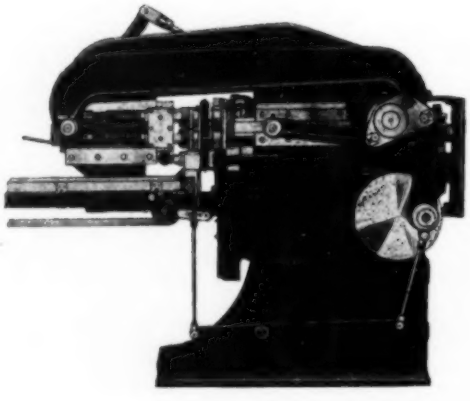

R. A. JONES AND COMPANY, INC.

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AS THE EDITOR SEES IT

A RECENT increase in fat quotas for household soaps from 74 to 78 per cent of 1940-41 has not been of any real aid to soapers and their operations are still restricted accordingly. Cancellation of government soap contracts may aid somewhat in easing the tight situation but it will probably be another month or so before the effects are felt fully. Some relief to soapers is anticipated from the cancellation of tallow and grease preferences previously enjoyed by non-soap users, but it will be some time before soap output will reflect any such relief. In short, the soap supply situation at the moment is not a great deal better than it was a month ago, but the outlook is for some improvement over the last quarter of 1945 and an accelerated improvement early in 1946.

Although soapers have been talking about an increase in oil and fat quotas, and the removal of all quota restrictions, they still report that they were unable during the third quarter of 1945 to purchase sufficient fats and oils to operate at the maximum quota figure. Improved supplies are anticipated for the fourth quarter of this year, but there is no assurance that these will materialize,—and until they do, soap buyers will of necessity continue to be restricted in deliveries by soap manufacturers.

HEAVY exports of fats and oils during 1944 are pointed to as the present chief cause of a shortage in this country during the better part of 1945 by a well-known soaper. Figures which previously were held to be confidential for "military" reasons now indicate that something over a billion and a half pounds of oils and fats were exported to Europe in 1945 from the United States of which eighty per cent were on Lend-Lease. Add to this the normal yearly imports of about two billion pounds of vegetable oils not received as in normal pre-war years, and it adds up to three and a half billion pounds, a deficit of close to thirty per cent in the yearly fat supply. It is this large deficit which we are now working to overcome and which makes quotas meaningless where sufficient fats are not available to permit soapers to operate at quota levels, this soaper points out. But with the American whaling fleet operating again in the Antarctic for the first time since 1938 and a wish for fifty million pounds of whale oil, hope again springs eternal in the breast of the American soap maker.

CONSUMPTION of tallow and grease in soap manufacture during 1944 set an all-time total record in excess of a billion and a half pounds. Of all fats and oils used in soap manufacture in 1944 amounting to something over two billion pounds, more than three-quarters was made up of tallow and grease. As expected, coconut and palm oils were used in reduced amounts for soap making, coconut showing a drop to 131,000,000 pounds as against 142,000,000 in 1943 and 484,000,000 pounds in 1941, the largest recent year on record. Reflecting also the war-time situation, the use of lard for soap manufacture in 1944 amounted to 176,000,000 pounds as compared to 74,000,000 in 1943 and practically none in normal pre-war years.

These figures recently released by the Bureau of the Census of the U. S. Department of Commerce show quite clearly the channels into which soap manufacture

has been forced by war-time scarcities of fats and oils, particularly of the high lauric acid oils. Although the average quality of soaps on the American market during the past few years has been remarkably good in view of the restrictions under which manufacturers have operated, it nevertheless has reflected the oil and fat picture as given by the Bureau of Census figures.

Slow and less profuse lather has been generally observed, cracking and splitting have been more common in bar and cake soaps, rancidity has been reported on more occasions, brittle and powdery chips have been noted,—in fact, physical defects as a result of raw material shortcomings could not be avoided. But with them all, it has been our observation that the general public has not been conscious of any material change in soap quality. And the degree to which quality has been maintained in the face of numerous difficulties is its own commentary on the skill of soap industry technicians.

WITH the exception of 1941, soap production in 1944 was the largest in the history of the industry, approximating four billion pounds. This marks an increase of some thirty per cent over the average for 1930-40. With the end of the war and eventually a reduction in industrial activity from the feverish levels of the war period, whether that reduction starts next year or two years hence, the long-range prospect is naturally for a reduction in soap consumption and production.

Over the past twenty years, soap consumption has reflected quite closely the status of the country's prosperity. From the giddy days of 1928-29, soap production dropped steadily as a result of reduced demand to reach a low point in 1933 well under three billion pounds. From then on, output moved up to reach an all-time high in 1941 at a figure which probably whent closer to five billion pounds than most soapers suspect. For the past several years, naturally fat shortages and war uses have complicated the manufacturing situation to a point where figures do not reflect accurately the state of demand and supply.

With the eventual return of soap manufacture to normal and the removal of all quota restrictions, and in spite of the end of war-stimulated demand, we would not be surprised to see the rate of production of soaps continue high for a year at least. To fill the depleted channels of distribution is expected to take a sizeable tonnage of soap. Export demand is likely to grow during 1946 and 1947. But to offset this, the belief has been expressed that it will take at least a year to clean out hoarded soap in American households. If non-soap detergents are to become a serious competitor for a material share of the soap market,—and most indications point in this direction,—the full weight of such competition cannot be felt for another several years at least. And a steadily increasing tonnage of soap kettle fats at lower prices is unquestionably going to be available over the next two years.

Add all of these ingredients together and shake well, and they will give the answer as to just what is going to happen in soap production and consumption between now and 1948. But no matter what the answer, it will all simmer down to the fact that if employment levels remain high and people have money to buy soap, they will buy it. If not, they will buy food with the money and soap will remain on the grocery store shelves.

SMALL soapers who have been vociferous in demanding the complete removal now of all oil and fat quota restrictions had best still their voices for a while. They should remember that when the flood gates are opened, the big fish are always stronger and more able to make their way in the seething waters of the mill stream.

Bentonite as a Detergent

BECAUSE of current scarcities of fats and oils for the soap kettle, considerable interest has been focused on bentonite as a useful extender for soap products. Despite the ending of hostilities in the Pacific — source of essential cocoanut oil — the critical shortage of saponifiable materials remains an unwelcome fact. How soon this situation will be remedied is obviously difficult to predict.

At this writing, amendment number 6 to WFO-42b is still in force. Specifying a 10 per cent reduction in the anhydrous soap content of chips, flakes, powders, granules and other similar products, it was hoped that the increased use of suitable builders would afford a substantial increase in the quantity of such products available to the public during the next year.(1)

When properly incorporated, bentonite is especially well qualified as a soap builder or fat extender. No inert ingredient, bentonite imparts actual detergent value to soaps. (2) Used as an active component, it is said not only to improve considerably the quality of soap but also to afford a substantial saving of fats and oils.(3) Not limited to war time scarcity use, bentonite possesses characteristics, aside from cost considerations, that make it a valuable soap component under normal conditions.

Bentonite is a colloidal clay formed by the weathering or alteration of volcanic ash. Two general types are known; the northern or true bentonites originally discovered in the Black Hills region of Wyoming and South Dakota and the southern or so-called meta-bentonites found chiefly in California and Texas.(4) However, deposits of both types of bentonite are found in many other parts of the United States, as well as in Canada, North Africa and Italy. (5) The northern, more widely used type of bentonite is characterized by its unique swelling and gelation properties which make it suitable for a number of special uses, including soap formulation.

By
Milton A. Lesser

Mined, dried and pulverized to various degrees of fineness, powdered bentonite is generally light colored, ranging from cream to olive green, but may be darker. After firing, the color is white, buff or brown. Varying quite considerably in composition accordingly to its source, bentonite may be described as consisting mainly of hydrous aluminum silicate, containing between 5 and 10 per cent of alkaline earth oxides.(6)

The commercial importance of bentonite may depend upon such physical characteristics as marked adsorption, absorption, or coalescence, its effect on emulsions, suspensions, and surface tension, its chemical reactivity or a combination of these factors. Probably the most outstanding characteristic of bentonite, however, is its ability to take up large quantities of water; behaving not like a crystalline compound, which it is, but like a colloid. Certain types of bentonite have a strong avidity for water, absorbing five times their weight or as much as 15 times their volume of water, with a consequent increase in volume and the formation of a slippery, plastic mass resembling soft soap. The best grades of Wyoming bentonite usually swell 12 to 15 times their dry volume. (4) However, volume increases up to 30 times are possible, depending on the way the water is added.(7) Unless excessive quantities of electrolytes are present, agitation of bentonite with water results in nearly permanent suspensions.

According to Gruber,(5) the swelling power of bentonite gives an estimate of its quality; the greater the swelling properties, the better the quality. Nonetheless, other factors must be taken into consideration in selecting a bentonite for a particular task. Thus a bentonite with an alkali base is probably best suited for soap or detergent use.

In early civilizations, colloidal clays constituted the chief washing materials and their displacement by soap was a rather slow, gradual process. However, the use of clays for washing has never been completely abandoned. To this class of materials, bentonite may be considered a comparative newcomer. Although the Indians undoubtedly used this clay for centuries before the coming of the white man, its historical record as a detergent goes back to 1873, when a Canadian geological report(8) noted the discovery of a light colored clay having a soapy feel and possessing detergent properties. This material was used at Hudson Bay posts for washing blankets.(9)

Similarly, the early pioneers of Wyoming noted a peculiar claylike substance in numerous "soap holes," which they called "mineral soap" or "soap clay" because it resembled soft soap. It was not until 1888 that the first commercial shipment was made. Since the point of origin was the Fort Benton formation in the Rock Creek district of Wyoming, the material came to be called "bentonite."

Some time elapsed before bentonite became a commercially important material. During World War I, when fats and oils were very scarce, deter-

gents containing bentonite were widely used in Germany. Well over a decade ago, bentonite-containing cleaning compositions were available in British markets under a variety of trade names. (10) Bit by bit, especially during the early nineteen twenties,(9, 11, 12) information began to accumulate on the value of bentonite as a detergent, especially from the standpoint of its uses as a soap builder. These studies indicated that bentonite may replace as much as 25 to 50 per cent of the soap substance, and at the same time increase the lathering and detergent properties.(4) Today it is recognized that bentonite is a useful and efficient builder for soaps and related cleansing materials.(2, 3, 5, 6, 13, 14, 15, 16)

THE means by which bentonite provides a detergent action has been the subject of much investigation. As might well be expected, bentonite has been compared with soap and studied from the aspects of its effects on this premier detergent. Comparisons with alkali have also been made.

Many factors enter the picture. Among the most important are the very notable emulsifying properties of bentonite(7, 17)—a major consideration with all detergent products. In cleansing, bentonite promotes emulsions. It adsorbs both solid and liquid dirt and is in turn coagulated, suspended or adsorbed so that the dirt is prevented from returning to its original surface. (4) In their comprehensive discussion of the properties which make bentonite suitable as a detergent, Hirschmann and Bechtner (18) have given details on the mechanism of its action. They emphasized that the negative charge of the suspended colloidal bentonite particles plus their emulsifying and suspending capacity and sorptive properties are the most important factors. Explaining how bentonite works, they pointed out that soiled fabrics, clothing or other material to be cleaned are coated with solid matter like soot and miscellaneous dirt bound together with oils, greases and perspiration. The oily portion of the soiling material is emulsified and suspended by the colloidal bentonite particles, while the carbon and soot are released and attracted to the negatively charged bentonite particles by virtue of their positive charges. Thus, by combined adsorption and absorption, the dispersed bentonite acts to remove dirt.

The spreading or "wetting" properties of a detergent are intimately tied up with its ability to alter surface tension. The pertinent evidence indicates that bentonite does not change the surface tension of pure water appreciably. However, studies of emulsions show that bentonite goes to the oil-water interface and influences the type of emulsion produced, thereby exerting an appreciable effect on the oil-water interfacial tension. Thus, bentonite may have an important though indirect influence on the spreading and wetting properties of the materials with which it is used.(4)

Although bentonite does not change the surface tension of water against air and so has little foaming or lathering properties of its own, it does have definite influences on the lathering properties of soap. When sufficient bentonite is combined with soap, it results in the formation of smaller, but tougher and more lasting bubbles. According to Williams,(6) a soap containing 20 per cent of bentonite will lower the surface tension of water from 6 to 10 per cent more than a soap made solely from glycerides and caustic lye.

With a substantial reputation as a water-softening agent,(19) bentonite helps to prevent waste and increases the efficiency of soap. Alkali bentonite serves to soften hard water through its base-exchange property and may aid the saponification of greasy materials through the alkalinity produced by its hydrolysis in water. It is well known that the addition of bentonite to hard water before the soap is added will materially reduce the quantity of soap required to give a froth. There is also proof that bentonite in a soap will reduce the quantity of soap required to give a lather with hard water.(4)

In summarizing, it may be said that bentonite has outstanding value as a detergent. Its dispersing, emulsifying and suspending properties are, like those of soap, due to colloidal action. Its remarkable sorbent action, not displayed by soap, and the fact that its electrical polarity is the opposite of that of carbon, give bentonite the power of attracting and carrying away dirt. With this must be coupled its water-softening action by which it not only lessens waste but also helps to prevent the formation of unsightly "bathtub rings," and related precipitates.

It has been stated(20) that the use of bentonite with soap or with soap and alkali helps to overcome disadvantages that are inherent in each of these substances; forming combinations having desirable properties that none possess individually. This seems to be borne out by experiments(3) made under identical conditions with pure soap and with a bentonite-soap combination. Washing results were definitely in favor of latter combination.

Such combinations have other advantages. Soaps made with bentonite are ready for use sooner after manufacture. Although such soaps dry to a finished state more rapidly they do not become too dry on long standing, because bentonite is a hydrous substance and retains a moderate amount of moisture. When properly prepared, bentonite soaps disperse or go into solution faster than pure soap.(20)

Bentonite does not attack fabrics or fibers.(21) It appears to be without harmful effects on the skin—a most important consideration these days when all types of detergents are carefully scrutinized for irritating action. This is indicated not only by the wide use of bentonite-based ointments for dermatological conditions,(22, 23) but also by its recommended(24) inclusion in cleansers for soap-sensitive or alkali-sensitive skins. Indeed, Schwartz (25) of the U. S. Public Health Service has said that "Colloidal clay is a good detergent with no skin irritating properties. . . "

Although various methods may be employed for determining the kind of bentonite most suited to incorporation in a soap formula, government experts(4) on this material advise that the most satisfactory way to learn

whether a particular bentonite will prove beneficial when used in a detergent seems to be to carry out practical washing tests, with and without bentonite, comparing the results as to cleansing effect and quantity of detergent required. In making such tests factors like the kind of water, temperature, time, agitation, fabric, and soil or dirt should be carefully controlled.

BENTONITE may be used in the manufacture of soap cakes, flakes, powders, pastes and liquids. The smooth gelatinous paste made with bentonite is really a natural paste soap in itself and is ideal for the incorporation of other ingredients. Although higher proportions are possible, the amount of bentonite used seldom exceeds 40 per cent. Of great importance is the way in which the colloidal clay is incorporated in the detergent, for in a large measure this will determine whether the bentonite serves as a builder or as a filler.

Several methods may be employed for incorporating bentonite into soap. The soap may be made in the usual way and the bentonite crutched in later or the dry powdered material is added to the melted fats in the soap pan, prior to the alkali. Often the bentonite is dispersed in water and the melted fats stirred into the resulting suspension and the alkali added last. In other cases, a bentonite paste or suspension is added to the soap.

Modern workers(3) feel that bentonite should not be added in a dry form to soap because it then fails to confer the desirable bentonite qualities to the finished product. The best method, it is believed, is to add a warm paste of bentonite and water to the molten soap.

This is stressed by Glenn(26) who states that bentonite should always be added to soap as an aqueous paste. It is then present in the swelled hydrous condition and assists in retaining the consistency of the soap and accelerating dispersion in water. If milled into soap in the dry state, he believes bentonite is of no greater value than talc or other inert filler in retaining moisture or facilitating solution. However, unlike other inert fillers, dry bentonite does become hydrated and goes into suspension as the soap is dissolved.

In the case of semi-boiled or cold process soaps a fairly thin bentonite suspension may be mixed with the fats before the addition of alkali. Used in this way, bentonite assists emulsification and thereby speeds up the saponifying process. In grained soap, the bentonite paste is worked into the molten soap. It cannot be added before saponification.

In preferred practice, bentonite is added, little by little, to warm water and allowed to cool and swell before the suspension is added to soap. In order to provide a more homogeneous product, free of lumps, the suspension is prepared at least 24 hours in advance. Such a product will gel on standing but with agitation this gel changes back to liquid, a property which greatly facilitates mixing.

Although different grades of bentonite vary in their ability to absorb water, one part of a suitable bentonite will generally take up two to six parts of water to provide suspensions of convenient consistency. It must be remembered, however, that the presence of electrolytes or soluble salts has a profound effect on the viscosity of bentonite solutions. Where there is an excess of electrolytic or ionizing compounds, flocculation occurs when the bentonite is added and no gel is formed. If bentonite is added to water containing a small amount of electrolyte, a thicker gel results. From this it may be concluded that a soap to which bentonite is added should not contain more than the average amount of free caustic or salt. (3) However, this phenomenon may be employed to produce a gel of a desired viscosity with a decrease in the quantity of bentonite ordinarily required. According to Gruber,(5) the correct amount of electrolyte should be added after the bentonite has been mixed with water to obtain good dispersion.

While up to 40 per cent of bentonite may be incorporated in semi-boiled or soft soap, for toilet soap the proportion ranges from 7 to 10 per cent. It has been found that as little as 3 to 5 per cent of bentonite will improve the properties of soap, but this quantity is too small to afford much saving in fat content. Bentonite gives toilet soap a particularly velvety feel, and its value in laundry soap is indicated by the fact that investigations have shown it to be useful in practical washing tests, both on a small scale and in commercial laundering.(4)

ALTHOUGH it is frequently a constituent of powdered industrial hand soaps, the more recent emphasis on specially formulated industrial hand cleaners has indicated important new potentialities for bentonite. In the cleaner developed and recommended by the U.S. Public Health Service(24, 25) to meet its own rigid requirements and standards, bentonite was advocated as one of the two alternate colloidal clays useful in such products; the other being kieselguhr. These colloidal clays, it was noted, provided good detergent action, acted as soft scrubbers, had no skin irritating properties and caused no clogging of plumbing. The type formula for such an industrial cleanser for general use was given as follows:

	Parts
Neutral toilet soap	30
Colloidal clay (bentonite or kieselguhr)	30
Synthetic detergent	10
Lanolin	5
Perfume	1

Mix the colloidal clay and synthetic detergent. Heat the soap and lanolin and mix with the above. This may be pressed into cake form, or 25 parts of corn meal may be added to make up 100 parts and the mixture then made into a powdered soap.

It may be significant that only bentonite was mentioned when this formula was included among those recommended by the Committee on Occupational Dermatoses of the American Medical Association.(27)

Soap flakes and powders made of stock containing bentonite are less brittle, more bulky and more quickly soluble. In addition they have improved detergent properties through the inclusion of bentonite.(20) According to Glenn(26) a fairly thick bentonite

paste can be added advantageously to soap flake base before drying. The finished flakes then retain their moisture and thus do not become excessively brittle for an increased period. He notes, however, that bentonite is not suitable if a perfectly transparent flake is required.

As already indicated, the smooth gelatinous paste formed by bentonite in water is almost a paste soap in itself and an ideal base for the inclusion of other ingredients. Paste soaps may be manufactured by making a thick paste of bentonite and water and stirring melted soap into it, both components being mixed while hot, until a paste of the desired consistency is obtained. An exceedingly fluffy product results. Improved properties may be obtained by adding trisodium phosphate or normal sodium phosphate. Adding sodium bisulfite provides a product with cleaning and bleaching properties.(20)

In making soft soap or liquid soap, bentonite suspension is mixed in with the fat charge. Soaps containing solvents like cyclohexanol or trichlorethylene are improved by the addition of bentonite.(28) In addition to imparting improved detergency and to some extent counteracting the lather-reducing effects of the solvent, bentonite also helps to prevent the possible separation of the solvent. Illustrative of such usage is the following "very effective" product for laundry use to clean dirty overalls and the like:(26)

	Per Cent
Bentonite	10
Cyclohexanol	20
Soft soap	70

In the above product, the formation of a bentonite paste is not a preliminary requisite because a concentrated product is required for subsequent dilution with water.

As a matter of fact, bentonite has found some of its more important and well established uses in the preparation of laundry compounds. In laundry practice, large quantities of bentonite are used with alkalies for the cleaning of heavily soiled, greasy items like overalls, wiping cloths, towels and such. Such usage not only results in marked economies in soap and alkali, but also in better, easier cleaning.(10)

Of interest in this connection is the statement that bentonite is especially valuable for scouring textiles, producing a more brilliant color in dyed goods and increased clarity and sharpness in printed materials, having a superior "bottoming" effect on yarns and fabrics, and producing a better finish on all goods than other scouring agents.(4)

Taking cognizance of advances being made in the field of synthetic detergents and wetting agents, it is interesting to note the increased frequency with which colloidal clays like bentonite are being used as vehicles or fillers, especially where solid or cake soap substitutes are required. Cake products, consisting essentially of a synthetic detergent with bentonite as a diluent and carrier, are available for use by persons who cannot use soap, either because of sensitivity or because of dermatological conditions. Formulas for making such soaps are available;(24, 25) the following being quite typical of products that can be pressed into cakes after mixing the ingredients:

	Parts
Synthetic detergent	20
Lanolin	3
Colloidal clay	76
Perfume	1

From the foregoing, it should be quite evident that bentonite is a most valuable detergent, one that can be of tremendous immediate value in stretching the amount of fats and oils available for the soap kettle. In the long range view, it is well to consider that bentonite as a constituent of soaps usually heightens detergent values, improves quality and affords definite economies.

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Vegetable oils are hydrogenated with the aid of a nickel catalyst prepared from a nickel salt of an organic acid. This salt is placed in a mixture of a white mineral oil 4-14 parts, and a fatty oil ¼-1 part by weight. In this mixture the nickel makes up 1 part by weight. The mixture is heated in a 10-25 inch mercury vacuum to decompose and then the nickel is filtered off. After hydrogenation of the oil is completed, a finely divided active carbon is added having a pH of 6.6-7.4, and containing less than 40 p.p.m. of free sulfur. The mixture is filtered to remove the catalyst and other solids. H. W. Vahlteich and R. H. Neal. U. S. Patent No. 2,365,125; C. J. Borkowski and J. L. Schille. U. S. Patent No. 2,365,045.

The French Perfume Material Outlook

as reported by

A. L. van Ameringen

van Ameringen-Haebler, Inc.

IN order to obtain a clear picture of the present perfuming material situation in France as far as it affects American users, it is necessary to consider the following five points: French production of floral products and essential oils; French importation of perfume materials; French aromatic chemical production; Consumption by French perfumers; Value of franc against American dollar.

French Production of Floral Products

Contrary to the many rumors circulating in the United States, no French flower plantations have been plowed under for other uses and no plantations were destroyed for military reasons. However, all plantations are in subnormal condition due to the lack of fertilizers, insecticides, fungicides and labor. On top of that a large percentage of the jasmin plantations are between 20 and 25 years old, which means, at their life's end. Weather conditions in 1944 caused poor crops so that no carry-over of floral products existed at the beginning of 1945.

Transportation difficulties are handicapping the Grasse producers as well as all of France. It is nearly impossible to bring flowers grown outside the immediate vicinity of Grasse to that city. Violets, for instance, come from a distance of about 150 kilometers from Grasse, and lack of trucks has created a complete absence of violet leaves absolute.

No oak moss has as yet been received from Yugo Slavia, and only mousse d'Arbre is available in Grasse. A normal crop of rose concrete is about 1,500 k.g. This year the crop was about 800 k.g.

It was believed in the United States that large quantities of neroli would be available following the liberation of France on account of the fact that the German manufacturers of Eau de Cologne, large users of neroli, would be out of the market. For reasons given later in this report, however no surplus of neroli was found to be available.

The jasmin situation is also very tight. Before the war Grasse produced 2,500 k.g. of jasmin concrete annually, and imported another 1,500 k.g. from French-owned plantations in Italy, Algiers and Egypt. Since the liberation of France no jasmin has been imported from those three countries. The Grasse production for 1944 amounted to between 1,250 and 1,300 k.g. That means a deficit of about 1,250 k.g. for the Grasse production alone.

In 1944 and again in 1945 some new jasmin plantations were started, but extremely hot and dry weather during July and August 1945 made it impossible to predict the crop outcome. However, no larger crop than the 1944 one can possibly be expected. Grasse plans increased plantations for the winter of 1945, and if weather is favorable, counts on a 1946 crop of from 1,800 to 2,000 k.g. of concrete. This is still below pre-war production of jasmin concrete. The program is to continue new plantings until the Grasse production reaches 3,000 k.g.

As for lavender oil,—heavy exports to England and the U.S.A. have depleted stocks on hand. The 1945 crop is expected to be about 30 per cent short. Lack of shoes makes picking of lavender in the mountains an unattractive job.

Importations from Abroad

Although Madagascar oils have been arriving in the United States since summer 1944, no shipments have as yet been received in France. Numerous orders were placed by French importers but lack of shipping has caused great delay in arrival. With the exception of a few tons of lemongrass, no essential oils or perfume raw materials have been received in France from any foreign country. Some bergamot and orris are expected soon from Italy.

Aromatic Chemical Production

Due to lack of coal and raw materials, aromatic chemical production is at a standstill.

Consumption by the French Perfume Industry

Grasse floral products, being the only materials available to French perfumers, have been consumed over recent months in far greater quantities than before the war. Many new perfumes and colognes are based entirely on natural French products. The French perfume industry, therefore, looks with alarm at any exports of the only materials still available to them, and is bringing pressure on the Grasse producers to take care of French requirements before exporting. It is obvious that increased national consumption at a time of subnormal crops is creating a serious situation. The Grasse producers, however, are trying to allocate their merchandise on a pre-war basis between France and the United States and England. They fully realize that export markets once lost may be lost forever.

Value of Franc Against U. S. A. Dollar and Pound Sterling

If we rate the value of the franc only by what is buys today in France, we totally overlook the effects of supply and demand. Due to the extreme

(*Turn to Page* 47)

The Coconut Oil Market Outlook

THE outlook for reasonably early resumption of substantial shipments of copra from the Philippines is definitely encouraging, according to John B. Gordon, secretary of the Copra Export Management Co., who has just returned to the United States from a six weeks' trip to the Philippines in the course of which he surveyed copra procurement possibilities in all parts of the Islands, set up the new corporation for operation, and approved selections of employee personnel. "With the Japanese war now terminated," says Mr. Gordon in his report to members of the CEMCO (Procter & Gamble Trading Co., Philippine Refining Corp., Spencer Kellogg & Sons, El Dorado Oil Works and Atkins, Kroll & Co.) there would seem to be "no reason why when CEMCO's supplies arrive in the Islands, the procurement of copra cannot get under way in as near an approach to an orderly manner as is possible in a country, the civilian economy of which, in the nature of things, must remain badly disorganized for the next several years."

"According to present shipping schedules," says Mr. Gordon, "there should be several hundred thousand bags and at least a hundred to two hundred trucks ready for use in the copra producing areas by the middle of October. By this time the managers for the Southern Islands, Messrs. John R. Laurence and Cyrus Padgett, will be on the ground and will have had time to assemble their staffs. Unless unexpected delays arise, the writer anticipates that there will be twenty-five thousand tons of copra moving out of the Philippines during the month of November and the same quantity in December. During 1946, there should be a gradual increase in the volume of exports, month by month. I estimate that the minimum shipments in 1946 will be not less than three hundred thousand tons with the possibility that a considerably larger volume can be shipped.

"Now that the war is over, it appears that there will be no shortage of eastbound shipping space and in view of the fact that ocean-going vessels are now being tied up for lack of cargo, there should be adequate space for shipment of consumer goods westbound.

"Only 2 per cent of the prewar copra production came from plantations. Since it is only the plantations that are suffering from undergrowth among the trees, it may be stated that for the greater part the coconut trees in the Islands are in excellent condition. In proportion to the number of trees, the destruction of coconut trees by the Army has been negligible."

While in the Philippines Mr. Gordon conferred with a large number of Army officers concerned with the establishment of policy governing Filipino civilian economic rehabilitation, with particular reference to copra production, collection and shipment. Among the officers contacted was General Douglas MacArthur, who, said Mr. Gordon, "manifested the deepest possible interest in Filipino economic rehabilitation and was especially interested in copra because he recognized that it was the most important of all the Filipino export industries from the angle of view of getting the Island economy back on its feet. He was in possession of the most profound knowledge of the necessary steps to get the civilian economy going. The first essential, he stated, was to give the Philippine peso purchasing power and thereby give the Filipino an incentive to work and accumulate pesos. General MacArthur stated that he was keenly aware that shipping to transport Filipino civilian goods was the prime necessity in accomplishing the revaluation of the peso, but that he was himself short on tonnage to transport troops and supplies to the Philippines."

"The general attitude of all Army officers interviewed in regard to starting the movement of copra from the Islands was uniformly cooperative," said Mr. Gordon. Nevertheless it was difficult, at least when the CEMCO visitors were in the Philippines (July 11 to August 20, when the war was still being fought) to get the Army to release any trucks for any purpose not directly connected with the war itself. The prospect of getting more help from the military would now seem to be distinctly better, with the war ended and with less direct need of shipping and transport for strictly military purposes. As Mr. Gordon observes, "much of that which is encouraging in the present situation arises from the earlier termination of the Japanese war than had been anticipated.

The prospects of obtaining equipment from the Army obviously would have remained meager as long as it was confronted with the task of waging the most costly of all the Pacific campaigns—the attack on the mainland of Japan."

Mr. Gordon, who besides acting as CEMCO's secretary is also the secretary of the Bureau of Raw Materials for American Vegetable Oils and Fats Industries, made the airplane trip to the Philippines in company with R. J. Bush of Atkins, Kroll & Co., vice-president and treasurer of the Copra Export Management Co. Mr. Bush suffered an attack shortly after arrival in Manila, and died on July 26 of coronary thrombosis. The trip from San Francisco to Manila was by Army Transport Command plane, and all travel through the Philippines was via Army courier plane or Army troop carrier plane. The Naval Air Transport Service brought Mr. Gordon back to San Francisco, arriving August 20.

He reports that damage in all parts of the Philippines, except those from which the Japanese were ejected with such rapidity that they did not have time to carry out a program of destruction, is severe. The Philippines are economically flat on their backs, with the Islands stripped by the Japs of everything they could carry off. It is rather unusual in this situation to find that there is currently more money in circulation in the Philippines than ever before in their history. The American Army of occupation, merchant seamen, etc., have put millions of dollars into circulation, and there is tremendous purchasing power with practically no consumer goods to buy. In this situation it is not at all remarkable to find that the natives have no particular desire to take jobs at what in normal times would be good wages.

The first step necessary in the rehabilitation of the Philippine economy is thus recognized to be the importation into the Islands of goods for civilian consumption. This is necessary to give the peso some purchasing power. Not until the purchasing power of the peso is restored will there be a great deal of incentive for the Filipinos to go to work at ordinary civilian pursuits.

With the war now over, there should no longer be any great problem involved in bringing about the introduction of consumer goods into the Philippines, as adequate shipping space should now be available. Also because there is so much money in circulation in the Islands, there are any number of merchants who have plenty of capital with which to finance such transactions. The encouragement of such imports is the first step in a return to a normal economy, and the Foreign Economic Administration is now engaged in materially enlarging its Philippine organization to distribute such trade goods. CEMCO will of course have a voice in seeing that trade goods are distributed by FEA in copra producing areas. Were this not the case, the more thickly populated areas, such as Manila, which are non-producers of the copra in which American soap makers are interested, might get the lion's share of the incentive goods.

"Besides the prerequisite of the introduction of incentive goods into the Philippines and the re-establishment of the purchasing power of the peso," Mr. Gordon points out in his report, "the procurement of copra from the Islands requires the delivery there of bags, scoops, scales and facilities for overland shipment in the shape of trucks. With the cessation of hostilities, the shipment of consumer supplies and copra gathering facilities to the Philippines will be expedited, which leaves the question of overland transportation paramount. The Filipinos' trucks were taken from them by the Japanese and shipped to Japan. The only trucks now in their possession are those which were given to the Commonwealth Government by the Army and now largely used for sanitary purposes in the city of Manila.

"In prewar days, 60 per cent of all copra marketed in Manila came in overland and a considerable part of this movement was by rail. Transportation by rail is possible in the northern part of Luzon. The Manila Railroad is operating northward from Manila to San Fernando. This area, however, is mostly a rice and general farming area and is of little interest from a copra producing viewpoint. Southward from Manila, according to information obtained from General Besson, Chief of the Manila Railroad, the railroad is in full operation to Calamba. There is a project under way to open the railroad from Calamba to Batangas. The Army engineers are doing the work and expected to have it completed by September first.

"This is a copra producing area and becomes of particular importance if the Army moves enough of its staging operations out of Manila to permit the use of the Port of Manila as an export point. It is of further importance in connection with the proposal of the Army that CEMCO supply two thousand tons of copra per month for the only remaining crushing mill in the Philippines (Central Vegetable Oil), Chinese owned and located in Manila. It would be used to supply edible oil and soap for the domestic population and the Army."

There is also said to be a possibility that the Manila Railroad beyond Batangas may be opened up by the end of the year. There are four or five bridges out, and in view of the fact that the war has now ended, it is questionable whether or not the work of their restoration will be undertaken by Army engineers. If the work of restoration is left to the Philippine

"... outlook encouraging for reasonably early resumption of substantial shipments of copra from the Philippines," says John B. Gordon, secretary of Copra Export Management Co., just back from a 6-week Philippine survey.

Government, they may be rather slow in getting it completed. Meanwhile the rail lines are operating only in segments.

Inter-island transportation by boat was also in the pre-war days an important link in the copra collection chain, — which must be restored now if normal copra collections are to be resumed. Mr. Gordon reports that:

"In prewar days there were about seventeen hundred inter-island boats in operation. These were all disposed of by the Japs, largely in order to keep the guerrillas from traveling inter-island and also because some of them were large enough to be utilized by the Japs in an important way as cargo carriers. The Army as a partial substitute for them gave the War Shipping Administration three lake type steamers of about thirty-five hundred tons of capacity in the month of July and nineteen F.S. boats, a small type of cargo carrier. These latter, however, are not much bigger than overgrown launches.

"In addition, it should be stated that the Army has hundreds of LCMs (landing craft mechanized) in various parts of the Philippines. Now that no further military campaigns are to be fought, it is probable that they will be disposed of in the Philippines. They are capable of carrying from thirty to eighty tons and would be ideal for operating in rivers along the shores of islands where there are no piers. They have end gates and since they draw very little water, they can run right up to a bank or shore and load copra. The large ones need a crew of only two to operate and could, therefore, be readily handled by the employees of the copra dealers."

ONE of the most immediate and pressing needs is a substantial number of trucks. "It is the thought of the FEA officials," Mr. Gordon reports, "to place the three hundred and twenty-five trucks which CEMCO now has on order (about one hundred of which were expected to arrive in the Islands in late September) and the three hundred to be purchased in the third quarter of 1945 into an over-all transportation company. Along with them will go seventy-eight trucks purchased by PAMCO (Philippine Abaca Management Corp.) and such trucks as can be procured from the Army when it departs from the Philippines for the occupation of Japan.

"It is the plan of the FEA to put transfer companies in operation by the use of these trucks in the parts of the Islands where the copra and hemp procurement programs are under way. They will operate on set schedules carrying food and other commodities together with copra and hemp with the proviso that the set schedules will be interrupted when it becomes necessary to make available a number of trucks for the loading of ships.

"While it has been the belief of the CEMCO organization in the Philippines and that of the writer (Mr. Gordon) that CEMCO would be better off operating its own trucks, an understanding such as that above outlined would seem to have favorable possibilities. The trucks would be kept busy all of the time and they would be engaged in the highly necessary operation of distributing consumer goods. Further, the FEA states that the U. S. Commercial Company will keep ordering trucks so that the number in operation will ultimately greatly exceed the number which CEMCO would individually have in use. The FEA at Manila has engaged the services of a highly competent trucking official by the name of L. G. James, who will have charge of the operation of the trucks."

Costs of operation of these trucks are expected to be high. Figures which were collected by Mr. Gordon indicated that operating costs, at least for a time, will be approximately three times those which applied pre-war.

Warehouses present another problem at all prospective central copra collection points. This is because the Army has taken possession of all warehouse facilities which were not destroyed by the Japs. Improvised warehouses can be used where small quantities of copra are to be stored, but at the main shipping points warehouses must be of a permanent nature to avoid losses from fire and theft. With the Army now moving troops and supplies into Japan and back to the United States, there would seem to be a better prospect that warehouses will be vacated and released to their former owners.

The lack of banking facilities has been a serious handicap, Mr. Gordon reports, in the task of restoring the copra industry to its normal state. Most banks were reported planning to reopen by September 1, however, at the time of Mr. Gordon's departure from Manila, and the collection of copra will no longer be handicapped by the difficulty of transferring funds. The demoralized situation on mail deliveries has also made operations difficult. Only official mail is carried by air, and ordinary business mail requires an interminable time to reach its destination. This applies to delivery from one point to another in the Philippines, as well as to letters between the Philippines and the United States. Telegraphic communication has been completely lacking.

The CEMCO organization consisted on August 18 of the General Manager, Manuel Igual, and two branch managers, one at Tacloban and the other at Zamboanga. Conditions for the starting of copra buying were said to be more favorable at Tacloban than at any other point in the Philippines, because of the availability of warehouse space, fairly good communications with Manila, etc. Buying was to start as soon as bags, scales and trucks, which have been on order for some time, arrived. As indicated above, it was hoped to start approximately 25,000 tons of copra a month moving out of the Philippines by November. These shipments will be advanced as rapidly as copra collection can be returned to something resembling normal conditions of operation.

The following glycerides containing 3 different saturated fatty acids have been synthesized and their physical properties determined: 1-stearyl-2-acyl-3-palmityl glycerol, 1-stearyl-2-acyl-3-myristyl glycerol, 1-stearyl-2-acyl-3-lauryl glycerol, and 1-stearyl-2-acyl-3-capryl glycerol. C. Chen and B. R. Daubert. *J. Am. Chem. Soc.* 67, 1256-8 (1945).

TECHNICAL Briefs

From Current Literature in the Soap and Detergent Field

Nigre Treatment

Soap nigres are purified by removal of impurities with soap values, and the soap and soap-forming acids removed with the impurities are recovered. The separation of soap values from the impurities is obtained by dilution with water or by treatment with salt, mineral acids, or alkalies. These impurities may then be separated by use of a centrifugal separator of the clarifier type or separator type. By use of a centrifugal separator of the valve-bowl type, it is possible to combine the steps of separating the nigre from the bulk of the saponified mass and the separation of the impurities with some soap values from the nigre. L. Sender, to Sharples Corp. U. S. Patent No. 2,369,372.

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Castor Oil Soap

A 30 per cent castor-oil soap has been found particularly suitable as a vehicle for antiseptic solutions. Castor oil is easily saponified and gives a satisfactory liquid soap without addition of alcohol. On hydrolysis the oil yields approximately the equivalent of 93 per cent of fatty acids and 9 per cent of glycerine, requiring 12.5-13 per cent of its weight of caustic soda for saponification.

The careful saponification of 33 ounces of castor oil with a 1:4 caustic soda solution will produce a soap which meets the following tests: (1) A portion is completely miscible with warm water to give a clear solution; (2) a portion mixed with about 5 times its volume of alcohol and tested with bromothymol blue indicator gives a yellow-green color, and no pink to phenolphthalein. The solution may then be completed to make 100 fluid ounces when cold.

A suitable proportion of this liquid soap can conveniently be used for the preparation of official formulae, since it is readily miscible with water, alcohol, and cresol. Lysol which meets the official dilution test can be produced by mixing equal volumes of the liquid soap and cresol. A precaution in making the soap is to pay particular attention to pH as indicated. A Firth. *Pharm. J. 154*, 318 (1945).

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Changes during Fat Autoxidation

A general pattern of chemical changes has been observed to accompany the oxidative destruction of a fat during the accelerated development of rancidity in the presence of oxygen at 110° C. During a variable induction period no detectable changes occur. However, at the time when peroxide formation increases appreciably, several chemical changes appear simultaneously: linoleic acid decreases, the total unsaturation as measured by the iodine value decreases, and the mean length of the carbon chain of the acids decreases.

The formation of conjugated unsaturation in an autoxidizing edible fat or oil seems probable. It has been demonstrated that a fat may become quite rancid and still retain at least 90 per cent of its original octadecadienoic, "linoleic" acid. These chemical changes have been observed consistently irrespective of the fat or oil under study, the length of its induction period, or the presence of added antioxidant or synergist. L. J. Filer, Jr., K. F. Mattil, and H. E. Longenecker. *Oil & Soap 22*, 196-201 (1945).

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Sulfites in Soap

Special soaps are being produced in Britain in connection with certain branches of munitions work, and also in the U. S. An example is the requirement by the U. S. Government that liquid soaps containing a wetting agent and a small proportion of potassium sulfite be used in all munition plants making or handling organic nitro bodies. Since the introduction of this soap, incidence of dermatitis and nitro poisoning has been reduced appreciably, although it has been found that a small percentage of individuals are irritated by the presence of salts in soap.

The value of the special soap depends on the fact that sodium and potassium sulfite react with and reduce organic nitro compounds and that the reduction product is colored a dark red. The worker washing after his shift has thus an immediate proof of the presence of nitro bodies on his skin, and by the progressive fading of the color can see the headway he is making in removal of the harmful material.

When the method was first tried, a 10 per cent solution of sodium sulfite, followed by the usual soap and water washing, was recommended, but this was found too tedious. Production of a bar soap containing sodium sulfite was found impracticable, since the desired soap-salt ratio could not be obtained. Addition of sodium sulfite to a liquid soap caused the soap to separate into layers on standing, but when the potassium salt was substituted for the sodium salt, such separation did not occur. *Chem. Trade J. 116*, 702 (1945).

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Precision of Soap Analyses

A study of analytical data obtained in the analysis of soap according to standard methods by a number of different analysts, showed that there is a significant increase in the reproducibility of results comparable with the increase in experience of the

analyst. The degree of precision and reproducibility apparently rise to a maximum after about one year of experience. E. W. Blank. *Oil & Soap 22*, 189-91. (1945).

Soap Stabilizer

The addition to soaps or detergents of 0.01-1 per cent of a stabilizing agent selected from a group consisting of aliphatic and aromatic compounds containing at least 1 trivalent nitrogen and at least 2 carboxyl groups attached to the nitrogen atom through short aliphatic chains, yields a product with lower susceptibility to deterioration and development of rancidity. Suggested stabilizers are nitrilotriacetic acid and its carbon-substituted alkyl or aryl derivatives. The stabilizer is preferably added subsequent to the boiling of the soap during manufacture. Soap containing 0.2 per cent of such a compound remained good for 224 days at 115° F. and 80 per cent relative humidity, while the control soap without stabilizer turned rancid in 3 days under the same conditions. L. F. Henderson, to Lever Brothers Co. U. S. Patent No. 2,371,623.

Refining Oils

Oils from vegetable or animal sources are refined while still mixed with the extraction solvent, by treatment with a non-saponifying neutralizing agent such as an alkaline salt, capable of yielding a softened soap stock. The latter is removed by centrifugal means, while the water and solvent are removed from the oil by vacuum treatment. The steps may be continuous. The continuous process include: mixing the oil and solvent with the neutralizing agent by means of proportioning mixers, centrifugal separation of the soap stock, reduction of color if necessary by treatment through proportioning mixers with caustic soda, recentrifugation, washing with water, and vacuum drying at 160-210° F. Partial dehydration prior to the removal of the soap stock followed by rehydration, gives a lower oil separation. The use of potassium salts or urea yields a more liquid soap. B. Clayton, to Refining. U. S. Patent No. 2,374,924.

Soap Antioxidant

The addition of 0.01-0.5 per cent of a biguanide *para-tert*-amyl phenyl phosphate to soap results in improved stability and resistance to discoloration and development of rancidity. Biguanide and its derivatives have been used as soap stabilizers, while *para-tert*-amyl phenyl phosphate has little or no stabilizing action. The combination of the two yields a product with improved properties. E. W. Cook, to American Cyanamid Co. U. S. Patent No. 2,375,626.

Fatty Acid Separation

Fatty acids are isolated from fats and the saturated acids separated from unsaturated acids by chromic acid oxidation of the latter. The fats are purified if necessary with 1-2 per cent of 60° Be. sulfuric acid, and treated before or after splitting, with the oxidizing agent. This consists of 1 part of chromic oxide, 2.5 parts of sulfuric acid and 4 parts of water. The acids of low molecular weight and dibasic acids are then removed by distillation and water extraction. This oxidation has been applied to unsaturated acids in another use and in this case is introduced as a step in the manufacture of saturated fatty acids. J. D. Fitzpatrick and L. D. Myers, to Emery Industries, Inc. U. S. Patent No. 2,369,036.

High Foaming Solutions

A solution of a surface-active agent can be prepared by mixing an alkaline solution of a high molecular-weight alkali-hydrolysis product of a protein with an alkyl sulfonyl chloride having 9-10 carbon atoms, and heating the mixture at boiling from 5 to 30 minutes. E.g., boil 1 part of soybean meal and 5 parts of 15 per cent caustic soda solution for 45 minutes, cool to 80° C; or boil 1 part of zein and 5 parts of 15 per cent caustic soda solution for 5 minutes to give a clear dark solution, and cool to 75° C; or boil 1 part of gelatin and the same amount of caustic soda and cool. To each mixture add 1 part of kerosene sulfonyl chloride and boil for 5 minutes. Alkali-decomposed products from proteins such as blood albumin can be used by treatment with an alkyl aryl sulfonyl chloride having an alkyl group of more than 3 carbon atoms. The products disperse in water to give solutions which foam well. J. B. Rust and L. Spialter, to Montclair Research Corp. U. S. Patent Nos. 2,373,602-3.

Stabilizing Essential Oils

Oxidation of essential oils which causes the development of off-odors has been a problem attracting the attention of many investigators. The stability of cinnamon oil as contrasted with the ease of oxidation of cinnamic aldehyde is claimed to be due to the presence of eugenol, which serves as an antioxidant in the natural oil. Addition of 0.1 per cent of catechol to peppermint oil was found to be effective as an antioxidant and preferable to hydroquinone. It is also claimed that perfumes used in toilet and laundry soaps may be stabilized by the addition of ascorbic acid or similar compounds. P. Z. Bedoukian. *Perfumery & Essen. Oil Record* 36, 101 (1945).

Boiler Scale Control

Corrosion of water systems and deposition of calcium carbonate and iron oxide may be controlled by treatment with very low concentrations of glassy phosphate, or molecularly dehydrated phosphates. For the prevention of scale, maximum efficiency is obtained by the maintenance of 2 p.p.m. of the glassy phosphate in the water. For the prevention of iron deposition, the phosphate must be added before the iron-bearing water is exposed to air.

When threshold-treated water is passed over metal surfaces, protective films are formed on these surfaces. The rate of film formation is a function of the rate of supply of the glassy phosphate to the metal surface. Adsorption of the glassy phosphates upon solid surfaces plays an important role in all of the applications of threshold treatment. G. B. Hatch and Owen Rice. *Ind. Eng. Chem.* 37, 710-15 (1945).

1944 Potash Soap Output 126,481,523 Lbs.

THE Potash Soap Division of the Association of American Soap and Glycerine Producers, Inc. announces that in 1944, seventy-six soap manufacturers, representing 69 per cent of the total number in this country who make potash soaps, manufactured 126,481,523 pounds of potash soaps of all kinds. This total consisted of 72,618,687 pounds of liquid soap (8,543,375 gallons); 43,571,894 pounds of paste, soft, jelly, base, or hard potash soaps; 7,337,022 pounds of dry cleaning soaps; and 2,953,920 pounds of soaps not classified.

In the manufacture of these soaps, 33,173,049 pounds of vegetable oils, rosin, and fatty acids and 7,180,198 pounds of caustic potash (basis 88-92 per cent KOH) were consumed. More detailed figures are provided in the following tables.

POTASH SOAPS MADE BY 76 MANUFACTURERS IN 1944
AND THE PRINCIPAL RAW MATERIALS CONSUMED
(Released by the Potash Soap Division of the Association of American Soap and Glycerine Producers, Inc.)

POTASH SOAPS MANUFACTURED IN 1944:

	Totals as Reported	*Converted into Pounds*
Liquid	8,543,375 Gals.	72,618,687*
Paste, soft, jelly, base, hard, etc.	43,571,894 Lbs.	43,571,894
Dry Cleaning Soaps	7,337,022 Lbs.	7,337,022
Unclassified		2,953,920†
Total Pounds		126,481,523

OILS AND FATTY ACIDS CONSUMED:

	Pounds as Reported
Whole vegetable oils (lauric)	3,098,261
Whole vegetable oils (other than lauric)	4,799,829
Distilled vegetable fatty acids (lauric)	3,184,024
Distilled vegetable fatty acids (other than lauric)	7,487,598
Foots, all, raw and acidulated (basis 100% fatty acid content)	2,427,915
Tall oil	3,406,966
Rosin	1,032,217
Red Oil	1,573,189
Stearic acid	664,813
Other fats, oils, or fatty acids (basis whole oil or 100% fatty acid content)	5,498,237
Total Pounds Consumed	33,173,049
CAUSTIC POTASH CONSUMED (Basis 88-92% KOH):	7,180,198 Lbs.‡

* Converted from gallons into pounds on basis of 8.5 pounds to one gallon.

† Computed from use by 3 companies of 775,307 pounds of oils and fatty acids (included in "Oils and Fatty Acids Consumed") for which no production was reported. The basis of computation is 3.81 pounds of *all kinds* of potash soaps produced for every pound of oil or fatty acid consumed.

‡ Includes 94,502 pounds of caustic potash computed from use of 65,501 pounds of lauric fatty acids and 409,165 pounds of whole vegetable oils and fatty acids other than lauric in making potash soaps for which no use of caustic potash was reported.

Two companies reported use of caustic soda, in addition to caustic potash, to complete saponification, but caustic soda use is not included in this report.

French Perfume Material Outlook

(*From Page* 41)

scarcity of commodities, French prices, in my opinion, do not reflect the real value of the franc as compared to the U. S. dollar or English pound.

Nobody will claim that $.80 per gallon for black-market gasoline indicated that the U. S. dollar was only worth 25 per cent of its pre-war value. The black-market price was only an indication of the comparative scarcity of gasoline. A comparison of French official prices against black-market prices does not show a uniform increase of black-market over official values, but a terrific variation caused by the comparative scarcity of the different commodities. Bread, for instance, is 420 per cent higher on the black-market, but sugar 1400 per cent above the official French ceiling. For years insufficient food has been available at official prices and all of France has been forced to buy part of its food from the black-market. This has of necessity resulted in wage increases and higher costs of production. Beyond a doubt sufficient supplies will sooner or later eliminate black markets, but wage reductions may trail behind a lowering of living costs.

What has been the effect on prices of Grasse products?

Below are the flower prices paid in 1939 and 1945.

	Francs	*Francs*
Violet Leaves	.44	8.65
Orange Leaves	4.04	44.50
Rose de Mai	4.10	44.50
Tuberose	25.55	180.00
Lavender Oil	225.00	2,000.00
Male manual labor	5.60 per hr.	23.15
Male trained labor	6.70 per hr.	27.25
Female labor	3.80 per hr.	20.66

The price of picking 1 k.g. of Jasmin Flowers increased from 3 to 45 francs.

The flower prices and wages given above explain the very high prices which the Grasse producers are asking today for their limited production. I can assure you that every one of them is greatly alarmed by the present situation. They fully realize the danger to their industry caused by prices which exclude the normal use of their products. They are not trying to profit from the present conditions; on the contrary, they will take all possible steps to arrive at more normal prices.

In ending this report, it must be mentioned that at the beginning of August 1945 not a drop of Grasse products had been shipped to England. We can thank the U.S.C.C. for the fact that the United States has received numerous shipments since late May, 1945. The U.S.C.C. not only expedited shipments of orders placed through them, but the work of their representative in France, G. M. Strauss, also greatly facilitated transactions directly between American importers and French shippers.

Future supplies of all floral products and most French essential oils will remain short for at least another year and perhaps longer. Prices will remain high even if the value of the franc should be changed from 50 Fcs. to 100 Fcs. to the U. S. dollar.

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TRADE NEWS. . . .

Report Kirkman Plant Sold

Sale of the Brooklyn plant of Kirkman & Son Division of Colgate-Palmolive-Peet Co., Jersey City, N. J., to Ply-Ridge Corp., was reported early this month. Although Colgate-Palmolive-Peet executives would neither confirm or deny that the deal had been consummated, other than to admit it was in the state of negotiation and that there still remained several loose ends to be tied up, it was learned authoritatively that the deal had been completed. In its July statement on refinancing to the Securities and Exchange Commission, the negotiations were mentioned. Although the Kirkman division may remain in its present plant for another five years as part of the arrangements, it was reported that the company planned to remain in Brooklyn for only about two years. Eventually the whole operation is to be moved to the Jersey City plant in order to effect economies through centralized operation there.

Soap Meeting January 10 and 11

The annual meeting of the soap industry sponsored by the Association of American Soap & Glycerine Producers will be held at the Waldorf-Astoria, New York, January 11, and will be preceded on the 10th by a full day session of the Potash Soap Division. The Potash Division will also meet on the morning of January 11, prior to the luncheon and open industry meeting. The Program Committee for the Potash Division met at the Hotel Vanderbilt, New York, October 4, with Herbert Kranich, Kranich Soap Co., Brooklyn, chairman of the section, presiding, to frame a program for their special session.

Among the topics considered for a place on the January 10 program are the following: development of special container linings for the shipment of potash soap products; the relation of synthetic detergents to potash soaps; the possible improvement of potash soap quality through use of purer caustic potash; the possibility of lowered costs and improved quality through the

HERBERT KRANICH
Kranich Soap Co.
Chairman Potash Soap Division

use of tailor-made fatty acids; and the use of phosphates in potash soaps. From these topics the committee was to formulate a program for the potash soap meeting. The general meeting program will be announced later.

Iowa Soap Co. Man Dies

James P. Gray, 38, chief assistant superintendent of Iowa Soap Co., Burlington, Ia., died Sept. 21, at Burlington. He was a graduate of Iowa Wesleyan College, Mt. Pleasant, Ia., and joined the company about 10 years ago. In addition to his wife he is survived by a son, James.

See Canadian Soap Increase

Increased supplies of bar laundry soap will be available to Canadians within a few weeks as a result of a new order designed to increase production of bar and household type soap, the Canadian Wartime Prices and Trade Board announced recently.

Boston BIMS Conclude Season

The two grand prizes in the final outing of the BIMS of Boston, held at Nashua Country Club, Sept. 26th, went to Robert E. Marsh, of A. N. Pierson, Inc., and David O'Connell, of Howe & French, Inc. E. E. Aldrich and Joseph Knowles of United-Rexall Drug Co. captured low gross honors. Low net was won by E. P. Williams of Hazel-Atlas Glass Co.

Soap Rosin Quotas Fixed

An amendment to Order M-387, which governs the use of rosin, and which was issued early last month, provides that during the fourth quarter of this year the amount of rosin put into process in all soaps must not exceed 55 per cent of the amount of rosin put into process for all soaps in the corresponding calendar quarter of 1944. The third quarter rosin quota for soap amounted to only 27½ per cent of the amount of rosin put into process in the third quarter of 1944 to make all soaps, plus 12½ per cent of the amount of rosin put into process in the corresponding quarter of 1944 to make civilian soaps, plus the total amount of rosin put into process between July 1 and August 27, inclusive, for the purpose of making soaps for delivery on "preferred orders" as defined in the Aug. 9, amendment to M-387.

Dunkel Wins CSA Tournament

Paul Dunkel, of Paul A. Dunkel & Co., New York, won the low net award at the fourth and final golf tournament of the 1945 season of the Salesmen's Association of the American Chemical Industry, Sept. 20, at Plandome Country Club, Plandome, N. Y. In addition, 16 other prizes totalling $125.00 in war stamps were awarded. Entertainment followed dinner.

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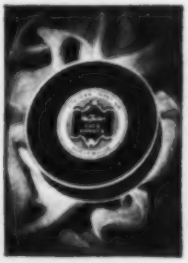

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Anita Louise, in
Columbia's Technicolor Production
"The Bandit of Sherwood Forest"

THE 5 ESSENTIALS OF A SELLING PACKAGE

1. It must be practical, production-planned, economical to manufacture, easy to fill or pack.
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Supply Association Adds Members

According to a recent announcement of the National Sanitary Supply Association its membership has reached 275. The following new members were added to its rolls recently: Cloyd A. Youngman, Sani-Toil Products Co., Omaha; Peter Towas, Ann Arbor Cleaning & Supply Co., Ann Arbor, Mich.; L. W. Doty, Imperial Chemical Co., Shenandoah, Ia.; Fred B. Lane, Merchants & Mfrs. Chemical Co., Houston, Tex.; J. Tyler Bowie, Bowie's Supply Co., Washington, D. C.; Maurice S. Gutman, Western Brush Co., Chicago; Bruce E. Bertram, Chamipon Chemical Co., Indianapolis; Leo B. Mooberry, Best Maintenance Co., Los Angeles; Samuel McCurley, Garnet Chemical Corp., Allentown, Pa., William S. Fuller, Fuller Supply Co., Birmingham, Ala.

Orlando Weber, Allied Head, Dies

Orlando Franklin Weber, 66, a founder of Allied Chemical and Dye Corp., New York, died in his apartment in the Waldorf Towers, New York, last month. Born in Grafton, Wis., he first entered business when he started a bicycle shop in Milwaukee. In 1902 he moved to Chicago and became one of the pioneers in the automobile industry. His executive talents were soon discovered by Eugene Meyer, publisher and financier, who in 1915 put him in charge of the Maxwell Automobile Company. After the first World War he became interested in the chemical industry, and with Mr. Meyer combined five of the leading American chemical companies into Allied Chemical & Dye Corp. Mr. Weber was chosen its first president, a position he held until his retirement in 1934. He was also chairman of the board of directors of the corporation for many years.

Asks Duty-Free Coconut Quota

A bill to establish a duty-free import quota of 200,000 long tons of Philippine coconut oil was introduced in the House of Representatives by Representative C. Jasper Bell, of Missouri, it was learned from Washington early this month. Under the bill, H.R. 4185, the quota would be allocated annually to the manufacturers in the Pihilippine Islands whose products were exported to the United States during the calendar year, 1940, proportionately on the basis of their exports to the U. S. in that year. The bill further provides that all coconut oil imported from the Philippines to the United States shall be rendered unfit for use as food or for the manufacture of edible products.

The bill also provides that no processing tax or other internal-revenue tax shall be collected on Philippine coconut oil, nor on coconut oil expressed or extracted in the United States from Philippine copra which has been rendered unfit for edible use.

Fritzsche to Issue Trade Report

Fritzsche Bros., Inc., New York, announce Oct. 3, plans to issue at regular intervals an informal trade report under the name, "Fritzbro Reporter."

Bobrick Making New Dispensers

Reconversion to peacetime production has been completely accomplished and assembly lines are turning out two new model soap dispensers, according to an announcement made Oct. 1, by Bobrick Manufacturing Corp., Los Angeles. One of the two new model soap dispensers is of the liquid type, while the other is a powdered soap dispenser. Gravity feed systems for liquid and lather soaps are now in the tooling up stage, the announcement states. The liquid dispenser is shown below.

Canada Orders Soap Stretching

An order governing anhydrous soap content of soaps made in Canada, effective Sept. 8, was issued recently by Canada's Wartime Prices and Trade Board. The regulation governing the anhydrous soap content of heavy duty packaged soap was contained in order No. A-1718, and is comparable to amendment No. 6 of War Food Order 42b issued in the United States July 24 by the U. S. Department of Agriculture. The Candian order rules that on and after Sept. 8, no manufacturer shall manufacture any brand, or type of heavy duty packaged soap, the anhydrous soap content of which exceeds 90 per cent of the anhydrous soap content of the same brand or type of heavy duty soap manufactured by him during the month of July 1945, and, the amount by which anhydrous soap content of any heavy duty package soap is reduced shall in every case be replaced by the same weight of builder. Every manufacturer is instructed that he shall maintain his monthly production of each brand or type of heavy duty packaged soap made by him in July, 1945, in the same ratio to his total production of all brands and types of heavy duty packaged soap as his average monthly production of that brand or type of heavy duty packaged soap in 1944 bore to his average monthly production of all brands and types of heavy duty packaged soap in 1944, according to terms of the order.

Chemical Exposition Date Set

The 20th Exposition of Chemical Industries is scheduled to be held the week of February 25 to March 2, in Grand Central Palace, New York, the International Exposition Company under whose management the show of raw materials, processing equipment and chemical is to be held, announced early in October.

Dominion Rebuilds Plant

Dominion Essential Oils Co., Lakefield, Ontario, Canada, has rebuilt its plant which was destroyed by fire a year ago. The new plant is now reported operating at capacity manufacturing essential oils from coniferous trees.

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ANTOINE CHIRIS, LTD., LONDON, ENGLAND

Honor Quinn at Luncheon

Robert J. Quinn, assistant to the vice-president and director of sales of Mathieson Alkali Works, New York, recently transferred to a new post in the Southeastern territory, was tendered a testimonial luncheon by a number of his friends in the chemical industry at the Hotel Roosevelt, New York, Sept. 27. William Callan, former president of the Chemist's Club, of New York, was toastmaster, while Charles Alexander, of L. Sonneborn Sons, Inc., New York, and president of the Salesmen's Association of the American Chemical Industry, acted as chairman. Ralph Dorland, of Dow Chemical Co., New York, on behalf of the Salesman's association, presented Mr. Quinn with a traveling bag and Robert Gould, of Heyden Chemical Corp., presented a set of cuff links on behalf of the "round table" of the Chemist's Club. Other speakers included Louis Neuberg, of Westvaco Chlorine Products Co., New York; J. Meyers, of the Compressed Gas Manufacturers Association of which Mr. Quinn is president, and Robert Baldwin, of the Chlorine Institute.

♦

Lueders 60th Anniversary

George Lueders & Co., New York, marked the 60th anniversary of the founding of the company with a luncheon at the Drug & Chemical Club, New York, on Oct. 10. Twenty-three employes of the company with 25 or more years of service were present. The three guests of honor at the celebration, all with over 50 years' service, were Ed V. Killeen, Ferdinand Weber, and Miss Rosa Kroog. Fred Lueders, president of the company, presided at the luncheon and presented the three 50-year members with special gold company pins. The company was founded by George Lueders, father of Fred Lueders, in 1885, its first offices and warehouse being located at 13 Gold St., New York, in the old drug district.

♦

Leppart Leaves WPB for PPG

John C. Leppart, deputy chief of the inorganics branch of the Chemicals Bureau of the War Production Board, was scheduled to leave the Board about Oct. 1, to return to Pittsburgh Plate Glass Co., from which he had been on leave of absence since Mar., 1942, when he first came to Washington as consultant to the bureau on chlorine and acids.

FRED A. NEUBERG

F. A. Neuberg Heads Enco

Frederick A. Neuberg, associated with Westvaco Chlorine Products Corp., New York, in various sales executive capacities for over 25 years, resigned as of Oct. 1, to join Enco Chemical Corp., New York, as president. Mr. Neuberg is the youngest son of the late William Neuberg, Sr., who founded the Enco firm more than 30 years ago. His decision to become operating head of Enco Chemical Corp. upon completion of his wartime activities at Westvaco is the first step in Enco's program of expansion.

♦

Rand New Monsanto President

William McNear Rand, for the last eight years a vice-president, was elected president of Monsanto Chemical Co., St. Louis, succeeding Charles Belknap, the company announced Sept. 25. He assumes his new office Oct. 1. Mr. Rand is 59 years old, and since November, 1943, when he became a member of the executive committee has had his headquarters in St. Louis. A native of Watertown, Mass., and a graduate of Harvard University, Mr. Rand entered the organization in 1921 through the Merrimac Chemical Co., Everett, Mass., serving successively as treasurer, sales vice-president and treasurer, executive vice-president and president.

Donald Williams Dow Sales Head

Donald Williams was appointed general sales manager and Donald K. Ballman as assistant general sales manager by Dow Chemical Co., Midland, Mich., the company announced last month. Mr. Williams, who has been assistant general sales manager since 1933, joined the Dow sales staff in 1924, as a member of the insecticides division. A 1916 graduate of Pennsylvania State College, he was connected with the Philadelphia Wool and Textile Association and with the extension department of Michigan State College before joining Dow. Mr. Ballman was graduated from Indiana University in 1929, and later returned to Indiana U. in 1934 for his master's degree in chemistry. In the fall of 1935 he went to Midland and was placed in insecticide sales. In 1934 the technical service and development division was organized under his managership, where he has served until his present promotion. The former Dow general sales manager, Leland I. Doan, vice-president and director of sales, now assumes the post of director of sales.

♦

Bertrand Rejoins Owens-Illinois

Eugene F. Bertrand, who was named sales manager for the drug and chemical industries division of Owens-Illinois Glass Co., Toledo, while serving with the War Production Board in Washington, for about a year and a half, has returned to his new post in industry, the company announced recently. Previously Mr. Bertrand had been manager of the pharmaceutical and proprietary division. While in Washington, he was chairman of the packaging committee of the WPB and assistant director of the Forest Products Bureau.

♦

Lever Box-Top Contest

Lever Brothers, Cambridge Mass., began recently what was claimed to be the first postwar, box-top contest. The company is giving away a number of Jeeps and $10,000 in cash prizes for the best paragraphs completing the phrase: "I will not cash in my war bonds because. . . ."

New Shulton Plant Begun

Shulton, Inc., New York, began construction of a new plant at Clifton, N. J., Sept. 11, which, when occupied around July 1, 1946, will replace the present Shulton plant at Hoboken, N. J. According to William L. Schultz, president, plans call for a two-story building, to face Route No. 6 at Clifton, with a center portion of three stories that will house the main offices of the company. The front of the new, modern structure will be 420 feet long, approximately two city blocks. The building site is 28 acres. The building will be of reinforced concrete with limestone front. The entrance will be 30 feet deep and 40 feet wide. Above the wainscot, a mural, 11 feet high and 100 feet long, depicting the romance of the perfume and toilet goods industry, will be painted. The plant site will be landscaped with flowers, shrubs and lawns, with a fountain in front of the building.

Wyeth, Johnson and King, of New York, are the architects, while Ford, Bacon and Davis, of New York, are the structural engineers. Walter Kidde Constructors, Inc., New York, are the builders.

Besides the building itself, the grounds will have an athletic field and a parking space for 350 cars. The interior of the building has been designed to accommodate the various manufacturing processes required to produce Shulton merchandise. These include manufacturing of soaps, lotions; compounding perfume oils; mixing and blending of powders; the manufacture of cardboard containers and their printing; the manufacture and decoration of plastic containers; and the packaging of all products into various sets and finished goods. Approximately 100 people will be employed in Shulton's new plant.

AOCS to Meet Nov. 7-9

The American Oil Chemists' Society will hold its customary fall meeting, the 19th, Nov. 7-9, at the Hotel LaSalle, Chicago, it was announced late in September. George I. Crapple of Wilson and Co., Chicago, is convention chairman. It was decided to hold the meeting following the announcement by the Office of Defense Transportation that the ban on conventions was to be lifted.

Higher Ceilings Granted Dietrich

J. Dietrich & Co., soap manufacturers of San Antonio, Texas, have been granted an increase in permitted price ceilings on two of their soap products, following application to the OPA. A new ceiling on their yellow bar laundry soap has been fixed at $3.25 per case of 60 12-oz. bars, while their "White Circle" soap now carries a ceiling of $3.75 per case. In approving the ceiling increase the OPA noted that Dietrich's labor and material costs have increased so substantially that they are no longer able to produce and sell these products at previous ceiling prices, and that the company's over-all profit position is unfavorable as compared with a representative peace time period. Cognizance was also taken of the fact that in the absence of production by Dietrich, soap buyers in this area would have to resort to higher priced sources of supply.

Joins PPG Chi. Sales Staff

R. M. Simpson has been appointed as a sales representative for the Chicago territory of Pittsburgh Plate Glass Co., Columbia Chemical Division, the company announced late last month. Mr. Simpson will make his headquarters in the Chicago office in the Tribune Tower Building, and will represent the company in the sale of alkalies, liquid chlorine and related industrial chemicals.

Jergens Buys New Factory Site

Andrew Jergens Co., Cincinnati, is reported early this month to have acquired 40 acres in Van Nuys, Calif., as the site for a new factory building to supplement its present plant in that district.

Wants to Import Hand Soaps

M. Humberto Lupi, P. O. Box 531, Caracas, Venezuela, is interested in the importation of hand soaps, as well as oils and fats for soap manufacture.

Army Cuts Soap Purchases

Termination of contracts for more than 25 million pounds of standard issue and special soaps for the Army was announced early in September by the War Department. Major item in the contracts' termination is 23,186,244 pounds of ordinary issue soap which the Quartermaster Corps has informed manufacturers it will not need. Other soaps upon which contracts have been terminated are: 3,000,000 cakes of white, floating toilet soap; 17,875,086 cakes of soft and hard, sea water, toilet soap; 320,000 pounds of mechanics hand soap; 650,000 cakes of grit soap; 1,659,500 cans of scouring powder and 600,000 packages of flake and granulated laundry soaps.

Stevens Back at Chemical Expo

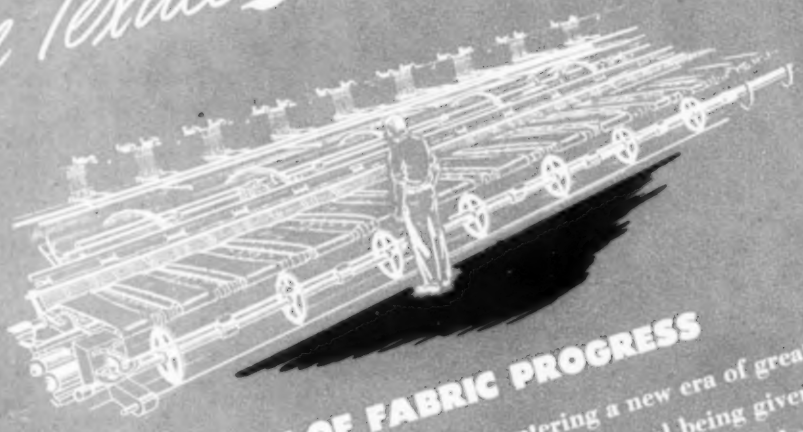
Major E. K. Stevens for the past three years attached to the Production Division, ASF in Washington, has returned to his position as Associate Manager of the Exposition of Chemical Industries, according to an announcement from Charles F. Roth, general manager of the Exposition. The Chemical Exposition is managed under the auspices of the International Exposition Company with headquarters at Grand Central Palace, New York.

Carbide and Carbon Catalog

Copies of the 12th edition of the catalog, "Synthetic Organic Chemicals," published by Carbide and Carbon Chemicals Corp., unit of Union Carbide and Carbon Corp., New York, are now available, the company announced recently. "Synthetic Organic Chemicals" presents in condensed form, up-to-date information on the properties, uses and specifications of more than 160 products sold by the corporation. The current edition includes data on 34 products not included in previous editions and contains new chapters on acetals, sulfur compounds, polyethylene glycols, hydroxyethyl cellulose and plasticizers. Revised tables also contain shipping information and specifications of interest to purchasing agents. Copies of the catalog may be obtained by writing to Carbide and Carbon, 30 E. 42nd St., New York 17.

ADVENTURES IN THE "MARGIN OF EXPERIENCE"

The Textile Industry



ARCHITECT OF FABRIC PROGRESS

The textile industry is now entering a new era of great promise. Not only are the traditional materials such as cotton and wool being given remarkable new qualities but entirely new yarns and fabrics are being "created" in whole cloth by those architects of fibres . . . the textile chemists. As a result, textiles are performing many functions and solving many problems where their use had never been considered before. It is possible, for instance, to produce a fabric today that would resist fire, salt water, mildew, moths, perspiration, decay—and at the same time have a finer appearance and take dyes better.

These developments are rising out of that wide "Margin of Experience" which the textile industry has been building up for many years. It is a similar "Margin of Experience" in the field of electro-chemicals, which enables Niagara Alkali Company to give constantly improving service to the industries that use its products.

Niagara ALKALI COMPANY

60 EAST 42ND STREET, NEW YORK 17, N. Y.

Caustic Potash • Caustic Soda • Perchloroethylene
Carbonate of Potash • Liquid Chlorine • Nitrites

synthetic detergents

- LIME SOAP DISPERSANTS
- HARD WATER CORRECTIVES
- SOAP SOLUBILIZERS
- WETTING AGENTS
- WASHING COMPOUNDS
- METAL CLEANERS

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Working on an orange blossom?

depend on dupont

METHYL ANTHRANILATE EXTRA

Everyone knows that Methyl Anthranilate is indispensable in orange blossom and eau de cologne. Floral and oriental bouquets need it too. But do you know that one of the finest Methyl Anthranilates is made by Du Pont?* More than that . . . it's again available.

Whatever your perfume problem, *depend on Du Pont!*

*Methyl Anthranilate is also available in a soap grade.

FLAVOR MANUFACTURERS
find Methyl Anthranilate Extra indispensable in the preparation of artificial grape flavor.

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BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

E. I. DU PONT DE NEMOURS & CO. (INC.)
ORGANIC CHEMICALS DEPARTMENT, AROMATICS SECTION, WILMINGTON 98, DEL.
Branch Offices: Boston, Charlotte, Chicago, New York, Philadelphia, Providence, San Francisco

THEY FINISHED THEIR JOB—LET'S FINISH OURS—BUY VICTORY BONDS

Discusses Restaurant Dishwashing

The factors involved and suggested methods of handling and washing dishes in restaurants are discussed in the September, 1945, number of *International Steward* magazine, by C. L. Henry of the Detroit Stewards' Association. After pointing out that "the vast majority of restaurants pay far too little attention to the dishwashing department, Mr. Henry suggests a systematic procedure that can be adopted, requiring a minimum of supervision. This includes segregation and classification of all utensils; washing of only one type of dish at a time; use of a pre-flushing device; periodic inspection of all mechanical equipment; maintenance of a water temperature in wash rack of about 130 degrees; rinsing temperature of about 180 degrees; air drying; careful consideration of both water and washing compound; and rotary type brush for washing glasses.

Controllers Again Honor Siddal

Kelly Y. Siddal controller of Procter & Gamble Co., Cincinnati, was reelected a vice-president of the Controllers Institute of America at that group's annual meeting, Sept. 24, in the Stevens Hotel, Chicago. Mr. Siddal was president of the Institute's Cincinnati Control for 1943-44.

J. H. White Joins Florasynth

Florasynth Laboratories, Inc., New York, have just announced the appointment of J. Harvey White to their Chicago staff. Mr. White comes to Florasynth from the War Production Board, where he was engaged in technical development work and in liaison and coordination between the W.P.B., the Army and the Navy and Maritime Commission Agencies. His work with Florasynth will be of the same general nature.

St. John's Honors Killeen

Edward V. Killeen, of George Lueders & Co., New York, recently received the honorary degree of Doctor of Laws from St. John's University, Brooklyn. Mr. Killeen has been active in Catholic charities in Brooklyn for many years and as a token of the regard in which he is held, the university at a convocation in celebration of its 75th anniversary conferred the degree upon him, in company with other distinguished citizens. Mr. Killeen also holds an LL.D. degree from Holy Cross College in Worcester, Mass., and is a Knight of St. Gregory.

DCAT Dinner Set for Mar., '46

The Drug, Chemical and Allied Trades Section of the New York Board of Trade has voted to hold its annual dinner in March, 1946, it was announced recently. The 1945 dinner was omitted due to the war.

To Double Chlorite Output

A new plant which will double the output of sodium chlorite is now being added to the Niagara Falls, N. Y., production facilities of Mathieson Alkali Works, the company announced last month. Construction of the new building is estimated at $35,000 and its total cost at about $323,000. Present production capacity is said to be far below demand for sodium chlorite, the company stated.

W.P.B. Forms Personnel Committee

The War Production Board recently announced the formation of a personnel committee to assist members of the Board in their return to industry. Type of people available range from engineers to public relations experts. There were 67 available at the time of the W.P.B. announcement and they include chemical, electrical, mechanical, civil, mining and industrial personnel. David Winton is head of the committee. Firms needing personnel are asked to communicate with the committee in Washington or in any of the 13 regional offices.

Quiz CD & CA Feature

An inter-city quiz, the "Quiz of Two Cities"—Chicago and St. Louis—was the feature of the first luncheon of the Fall season of the Chicago Drug and Chemical Association, held Sept. 27, at the Drake Hotel, Chicago. The quiz was conducted by direct wire between the two club teams who were holding simultaneous lunches.

Hercules Enlarges Plant

A $1,250,000 addition to its naval stores plant at Brunswick, Ga., now under construction, and which is expected to be producing by Apr. 1, 1946, was announced late in September by Hercules Powder Co., Wilmington, Del. The new unit will add approximately 3,600,000 pounds of rosin and resinous products and 720,000 pounds of liquid products to the plant's monthly output. When the plant is completed, Hercules wood naval stores production capacity will total more than 350,000,000 pounds of finished wood naval stores products each year, which is approximately half of the U. S. supply. The Brunswick unit, plus the Hercules Hattiesburg, Miss., plant produce, at capacity rates, finished naval stores of all kinds in excess of 300,000,000 pounds a year. An increased supply of Hercules chemical materials, such as "Thanite," and liquid terpene derivatives for insecticides, and modified rosins which are used in the production of soaps, paper size, adhesives, etc., is expected to be available when the new production unit is completed.

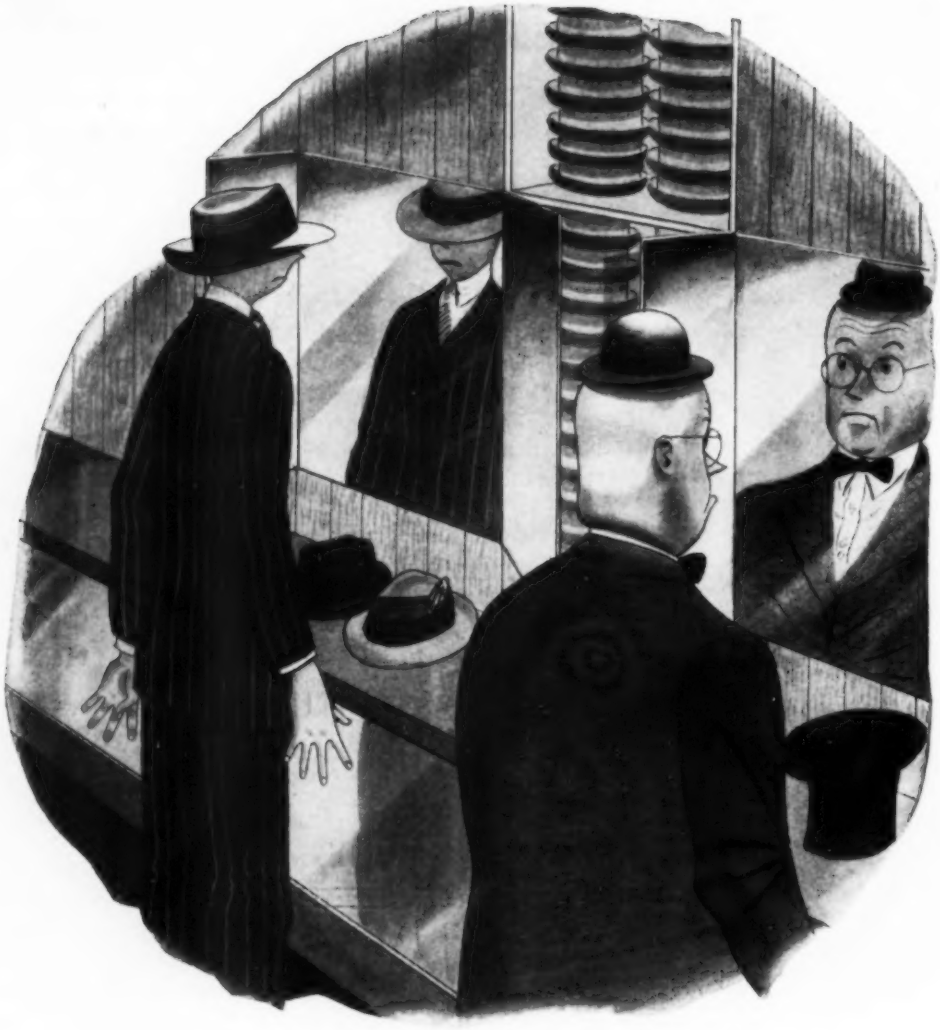
Richard T. Yates, Jr., has been appointed assistant director of sales of the naval stores department of Hercules Powder Co., Wilmington, the company announced Sept. 26. He was formerly manager of domestic sales department.

"Air-Wick's" Advertising Plans

The most intensive newspaper advertising campaign in its two year history is scheduled this fall for "Air-Wick," household deodorant of Seeman Bros., New York, it was announced recently. Newspapers, a 15-minute radio show over Station WABC, New York, and magazine space in *Life*, *Ladies' Home Journal* and *Good Housekeeping* are included in the "Air-Wick" campaign.

P&G Accountant Heads Controllers

C. K. McCracken, chief accountant of Procter & Gamble Co., Cincinnati, was recently elected treasurer of the Cincinnati Control of the Controllers Institute of America.



"Do *you have lid trouble?*"

OF all people, it shouldn't happen to canners. That's why we take such pains to see that every item in the manufacture of Crown cans is just right for your most efficient operation.

When you use Crown cans, you are sure of getting the correct type of plate . . . the proper coating for your particular job. You likewise know that the end seams have been given a liberal flow of compound . . . that there are neither cracks nor perforations in the ends. And since proper sealing of the ends calls for precisely functioning closing machines, we assure you Crown's equipment for this purpose is the finest made.

CROWN CAN

INDEPENDENT AND HELPFUL

CROWN CAN COMPANY • NEW YORK • PHILADELPHIA • Division of Crown Cork and Seal Company, Baltimore Maryland

BIDS AND AWARDS

Navy Soap Awards

In a recent opening for miscellaneous supplies by the U. S. Navy Department Bureau of Supplies and Accounts the following chip soap awards were announced: S. Strunz & Son, Pittsburgh, lot 1, item 81, 430,100 pounds at 11 cents; Kamen Soap Products Co., Barbertin, O., lot 2, item 86, 3,000,000 pounds at 4 cents.

N. Y. Navy Soap Awards

The following awards have been announced in recent openings for miscellaneous supplies by the New York Navy Purchasing Office, New York: Lever Brothers Co., Cambridge, Mass., soap and flakes, $136.44; Procter & Gamble Distributing Co., Cincinnati, laundry soap, $179.55, "Lava" soap, $4,567.50 and "Ivory" soap, $7,934.56.

FWA Detergent Bids

The following bids were received on 60,000 pounds of wall cleaning detergent in a recent opening for miscellaneous supplies by the Federal Works Agency, Public Buildings Administration, Office of Buildings Management, Washington, D. C.; Capital City Cleaner Co., Washington, D. C., $6,300; General Dyestuff Corp., New York, $7,800; National Aniline Division of Allied Chemical & Dye Corp., New York, $7,800; E. F. Drew & Co., New York, $10,800 and Fort Washington Chemical Products Co., New York, $21,600.

Navy Award to Oakite

Oakite Products Co., New York, the only bidder on 30,000 pounds of cleaning compound, entered a bid of 11.9 cents, which was accepted in a recent opening for miscellaneous supplies by the Norfolk Navy Yard, Portsmouth, Va.

P. O. Grit Soap Bids

In a recent opening for miscellaneous supplies by the Post Office Department, Washington, D. C., the following bids were received on 2,500 pounds of grit hand soap: Eagle Soap Co., Brooklyn, 4.4 cents a pound; Unity Sanitary Supply, New York, 7.5 cents and Day & Frick, Philadelphia, 4.55 cents.

Post Office Carbon Tet. Bids

Among the bidders on 300 gallons of carbon tetrachloride in a recent opening for miscellaneous supplies by the Post Office Department, Washington, D. C., were: Alex C. Ferguson Co., Philadelphia, 80 cents a gallon; Pennsylvania Salt Manufacturing Co., Philadelphia, 80 cents; R. M. Hollingshead Corp., Camden, N. J., 2 cans to a case, $1.12 a gallon, 4 cans to the case, $1.09, and 6 cans to a case, $1.18; Rose Chemical Co., New York, $1.138; Stephen Chemical Co., Chicago, $1.06; B. R. Elk & Co., Garfield, N. J., $1.45; Crystal Soap & Chemical Co., Philadelphia, $1.85 and Carbona Products Co., New York, $1.90.

Scouring Powder Bids

The following bids were received on 46,000 pounds of scouring powder in a recent opening for miscellaneous supplies by the Post Office Department, Washington, D. C.: Unity Sanitary Supply Co., New York, 6.5 cents a pound; Lava Co. of America, Milwaukee, on 11,000 pounds, 4.63 cents and on 5,000 pounds, 4.69 cents; and National Milling and Chemical Co., Philadelphia, 3.86 cents.

Treasury Sanitary Supply Bids

In a recent opening by the Treasury Department, Washington, D. C., for miscellaneous supplies the following bids were received: on 60,000 pounds of laundry soap, Wm. Messer Corp., New York, 8.49 cents a pound; J. Eavenson & Sons Division of Wilson & Co., Camden, N. J., 756 containers of distinfectant; James Huggins & Son, Malden Mass., 78 cents a gallon; Koppers Co., White Tar Division, Kearny, N. J., 94 cents a gallon.

Veterans Administration Bids

In a recent opening for miscellaneous supplies by the procurement division of the Veterans Administration, Washington, D. C., the following bids were received on several types of soap: item 1, 3,750 pounds of green soap for Hines, Ill., Crystal Soap & Chemical Co., Philadelphia, $438.75; Puritan Co., Atlanta, Ga., $516; R. M. Hollingshead Corp., Camden, N. J., $562.50 and on 164 one pound bars of hard soap, Conti Products Corp., $24.04.

Phila. Navy Bids and Awards

The following bids were received in a recent opening for miscellaneous supplies by the Philadelphia Navy Yard: on 15,000 gallons of dry cleaning fluid, Jaegle Paint & Varnish Co., Philadelphia, Sun Oil Co. material as required, 22 cents a gallon, which was accepted; A. C. Fergusson Co., Philadelphia, 26 cents; Globe Solvents, Philadelphia, 32 cents; R. M. Hollingshead Corp., Camden, N. J., 29.5 cents; Pioneer Oil Co., Philadelphia, 24 cents; Standard Oil Co. of New Jersey, New York, 10.502 cents; on 10,000 cakes of urinal deodorant, Crystal Soap & Chemical Co., Philadelphia, 6.1 cents each, accepted; Clifton Chemical Co., New York, 7.5 cents; Creco Co., Long Island City, New York, 8.5 cents; C. B. Dolge Co., Westport, Conn., 9 cents; Fuld Brothers, Baltimore, 6.5 cents; Odora Co., New York, 6⅞ cents and U. S. Sanitary Specialties, Chicago, $375.

Eastern Pa. PCA Group Meets

Lawrence S. Dillon, Curator of Insects at the Reading Public Museum, spoke on "Our Friends, the Insects" at the Sept. 18th, meeting of the Eastern Pennsylvania Pest Control Association at the Elk's Club in Reading, Pa. Hugh Smith, manager of the Better Business Bureau, of Philadelphia, also spoke at the meeting on rackets designed to cheat business men. The next meeting of the group is to be held Dec. 11, in Philadelphia.

OUR 60th YEAR 1885-1945

May we pause at this 60th year milestone, to offer our sincere thanks and convey our deepest appreciation —

To those friends whom we have had the privilege of serving —

To our contemporaries in the trade from whom we have received many courtesies —

To our suppliers in foreign countries the world over —

For their valued cooperation which has made our business possible.

The mutual confidence and friendships developed through the years, since the founding of this business by Mr. George Lueders in 1885, we regard as our most cherished possession.

60 years of continuous, active service in the perfume, cosmetic, and flavor industries.

NEW TRADE MARKS

The following trade-marks were published in the September issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Mark Applications

LEM-O-PINE—This in upper case, extra bold letters for general, household cleansing preparation. Filed Nov. 9, 1943 by G. F. Brown Co., Philadelphia. Claims use since Oct. 5, 1943.

ROYAL OAK—This in upper and lower case letters for bath, hand, and shaving soap, shaving cream and shampoo soap in cake or bar form. Filed Mar. 1, 1944 by Lightfoot Schultz Co., New York. Claims use since Jan. 29, 1942.

BOCO—This in large and small, heavy shadow, capital letters resembling metal for metal polish. Filed Apr. 7, 1945 by Boco Co., Cleveland. Claims use since Apr. 2, 1945.

GOLDEN BEAM—This in upper case, bold letters for multi-purpose cleaning preparation. Filed Apr. 20, 1945 by Price Detergent Co., Shelton, Wash. Claims use since Mar. 1, 1945.

ONEXIT—This in upper case, bold letters for liquid cleaning compound for floors. Filed Apr. 23, 1945 by Hillyard Chemical Co., St. Joseph, Mo. Claims use since Apr. 10, 1945.

SPARKOLA—This in large and small, bold, capital letters for boot polish, liquid white shoe cream and shoe soap. Filed Apr. 24, 1945 by Silverite Gutterman Co., Boston. Claims use since Mar. 10, 1945.

KERODIN—This in upper and lower case, extra bold, black, script letters for preparation for athlete's foot. Filed Oct. 30, 1944 by Kerodin Products Co., Chicago. Claims use since June 15, 1938.

WILCOLENE—This in upper case, bold letters for liquid compositions that inhibit the formation of sludge, gums or soot in internal combustion engines. Filed Apr. 10, 1945 by Wil-Co-Lene Mfg. Co., Newark, N. J. Claims use since Dec. 28, 1939.

TETRA PHOSPO-GLUCO SATE—This in upper case, bold letters for chemical product used in water treating for scale and corrosion control. Filed May 3, 1945 by D. W. Haering & Co., Inc., Chicago. Claims use since July 6, 1938.

LAUND-GENE—This in upper case, bold letters for disinfectant, deodorant and cleaner. Filed May 4, 1945 by New England Chemical and Supply Co., Manchester, N. H. Claims use since Feb. 15, 1945.

PENTAWAX — This in upper case, bold, stencil letters for synthetic wax-like solids useful for replacement of natural waxes. Filed May 14, 1945 by Heyden Chemical Corp., New York. Claims use since Jan. 4, 1943.

MIDSOLV—This in upper case letters forming an arc for chemical solvents used for degreasing metal articles. Filed May 24, 1945 by Midwestern Sales, Inc., New York. Claims use since Mar., 1944.

NUTRA—This in upper and lower case, extra bold letters for shampoo. Filed May 25, 1945 by Shaw Products Co., Boston. Claims use since Jan. 10, 1945.

DEENOL—This in upper case, extra bold, black letters for insecticide. Filed June 21, 1945 by E. I. du Pont de Nemours & Co., Wilmington, Del. Claims use since May 16, 1945.

DEENATE—This in upper case, extra bold, black letters for insecticide. Filed June 21, 1945 by E. I. du Pont de Nemours & Co., Wilmington, Del. Claims use since May 12, 1945.

DIPPO—This in upper case, bold, italic letters for silver cleaner. Filed Mar. 7, 1945 by Interchemical Corp., New York. Claims use since Feb. 20, 1945.

ZOL—This in upper case, jagged edged initials for dry cleaning solvents. Filed Apr. 7, 1945 by Stauffer Chemical Co., New York. Claims use since Jan. 5, 1945.

SEE SUDS—This in upper case, round edged letters covered with minute white circles and with the letters "s" in the form of sea horses for powdered soap compound. Filed May 31, 1945 by See Suds, St. Louis. Claims use since Apr. 1, 1944.

DIDIT—This in upper case, extra bold, black, underlined letters for insecticides and fungicides. Filed Apr. 3, 1945 by Derris, Inc., New York. Claims use since Mar. 17, 1945.

DEEDETENE—This in upper case, medium letters for insecticide. Filed May 11, 1945 by Georgia-Carolina Oil Co., Macon, Ga. Claims use since Apr. 25, 1945.

DEE-T-CIDE—This in upper and lower case, bold letters for agricultural chemicals having insecticidal properties. Filed May 14, 1945 by Pennsylvania Salt Manufacturing Co., Philadelphia. Claims use since Apr. 27, 1945.

EUREKA—This in upper case, bold letters set in an arc for polish for varnished and lacquered surfaces, etc. Filed Apr. 10, 1945 by Eureka Products Co., Chicago. Claims use since June 1, 1937.

REM-MOVER—This in upper case, extra bold, black letters for liquid hand cleaner and hand cleaning cream for removing hectograph carbon ink and similar inks and chemical stains. Filed July 28, 1944 by Remington Rand, Inc., Buffalo, N. Y. Claims use since Oct. 15, 1943.

DENTALAVE—This in upper case, extra bold, black letters for mouth wash. Filed May 22, 1945 by Angelus Laboratories, Los Angeles. Claims use since May, 1931.

SPARTAN—This in upper and lower case, bold, script letters for shampoo. Filed May 25, 1945 by Boston Drug & Chemical Co., Boston. Claims use since Nov. 1, 1944.

CARBOBLAST—This in upper case bold, stencil letters for compounds for cleaning and polishing metals. Filed June 21, 1944 by Turco Products, Inc., Los Angeles. Claims use since Feb. 15, 1944.

SCIENTIFIC 1005—This in upper and lower case, bold letters for

Perfume Specialties for

LAUNDRY SOAPS

SOAP CHIPS and POWDER

PUMICE and HAND SOAPS

SCOURING POWDER

COLD SOAPS, Etc.

LAUNDERING and scouring soaps — the soaps that are used to keep things spick and span in the home—present an odorizing problem far different from that of the finely scented toilet soap. Theirs is a special problem, influenced not only by the physical character of the finished soap, but by the character of materials used in its composition and by the costs and conditions it will have to meet ultimately in its particular market. By virtue of long, successful experience in this field, our laboratories are fully prepared to render competent, helpful assistance to manufacturers in the selection or creation of odor effects that will **add** to the salability of their products **without** disturbing their costs. May we suggest that you write, 'phone or call on us for preliminary consultation?

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soaps. Filed Jan. 31, 1945 by S. H. Kress and Co., New York. Claims use since July 1, 1944.

ACE—This in upper case reverse letters on a black disc background and beneath the symbol of the ace of clubs in reverse for shoe polish, dressing and shoe waxes. Filed Apr. 14, 1945 by Old Dutch Industrial Products Co., Harrison, N. J. Claims use since February, 1944.

TUYA TOILET SOAP—This in upper and lower case script letters on a fanciful design showing the mythical figure of Pan. Filed Apr. 18, 1945 by Para Ti Corp., New York. Claims use since Oct. 17, 1944.

KUPIE ALL PURPOSE SOAP—This in large and small caps and script reverse letters on a black rectangular background and above five large bubbles and a number of small ones, for soap. Filed Apr. 19, 1945 by Zoned Soap Co., Ft. Wayne, Ind. Claims use since Oct. 1, 1944.

DRYSEQ—This in upper case, extra bold, black letters for water soluble, alkali silicate for use in degreasing and removing soil from metals, textiles, etc. Filed May 10, 1945 by Cowles Detergent Corp., Cleveland. Claims use since Feb. 7, 1945.

PYNAMULSE—This in upper case, bold letters for general household cleaner. Filed May 14, 1945 by Morton S. Pine Co., Cleveland. Claims use since Dec. 29, 1944.

ANTISEPTIC VELVO—This in upper case block, and upper and lower case bold script letters for antiseptic powdered hand soap. Filed May 16, 1945 by Sanitary Soap Co., Paterson, N. J. Claims use since Mar. 1, 1945.

OAKITE—This in upper case, extra bold, black letters for cleaning preparations in powder, granulated, liquid, semi-liquid or paste form. Filed May 18, 1945 by Oakite Products, Inc., New York. Claims use since Feb. 2, 1909.

DENSCO—This in upper case, outline letters on a white diamond design within a reverse rectangle for handpiece cleaner. Filed June 9, 1945 by The Dental Specialty Manufacturing Co., Denver. Claims use since Jan. 1, 1939.

DUST TREAT—This in upper case, bold letters for spray oil and polish for use on floors, furniture and woodwork. Filed Feb. 14, 1945 by C-Z Chemical Co., Beloit, Wis. Claims use since Feb. 20, 1941.

DUST-BAN—This in upper case, bold, stencil letters for floor oil. Filed Feb. 24, 1945 by L. Sonneborn Sons, Inc., New York. Claims use since 1943.

PLANTGARD GARDEN SPRAY—This in upper and lower case, extra bold script and upper case, bold block letters for insecticide. Filed Oct. 21, 1944 by Garden Products Co., St. Louis. Claims use since Apr. 15, 1927.

LE SONIER—This in upper and lower case, bold, script letters beneath the fanciful drawing of a nude female for shampoos. Filed Feb. 16, 1945 by Le Sonier, Inc., Boston. Claims use since 1932.

NO. 91 FLAKE ALKALI—This in upper and lower case, bold letters for caustic soda compositions for use in industrial bottle washing machines. Filed Apr. 6, 1945 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since June 12, 1941.

721 SPECIAL—This in upper case, extra bold, black letters for caustic soda composition for use in industrial bottle washing machines. Filed Apr. 6, 1945 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since Jan. 26, 1940.

SULFOAM—This in upper case, bold letters for shampoo. Filed Apr. 13, 1945 by Lawrence Laboratories, Brooklyn. Claims use since June 13, 1944.

ABBOMYCIN—This in upper case, extra bold letters for chemotherapeutic agents of bactericidal activity. Filed May 31, 1945 by Abbott Laboratories, No. Chicago. Claims use since May 9, 1945.

SPC—This in upper case, bold, black letters on a heavy rule for an air purifier in the form of a spray. Filed June 1, 1945 by Leo Mann, Boston. Claims use since Apr., 1941.

PARALATRUM—This in upper case, medium letters for wax composition used for polishing floors, furniture and the like. Filed May 25, 1945 by Industrial Raw Materials Co., New York. Claims use since May 10, 1945.

SCOTCH BOY—This in upper case, extra bold, black letters beneath the fanciful drawing of a boy in Scottish costume. Filed May 25, 1945 by Minnesota Mining & Manufacturing Co., St. Paul. Claims use since Mar. 14, 1945.

Trade Marks Granted

415,297. Shaving soap and cream. Filed by Sportline, Inc., New York, Nov. 8, 1943. Serial No. 464,831. Published May 8, 1945. Class 4.

415,325. Disinfectant and chemical rust preventives. Filed by Ludwig Scherk, Inc., New York, Aug. 25, 1944. Serial No. 473,617. Published May 15, 1945. Class 6.

415,328. Tooth paste, disinfectant and chemical rust preventives. Filed by Ludwig Scherk, Inc., New York, Aug. 30, 1944. Serial No. 473,751. Published May 15, 1945. Class 6.

415,457. Toilet and bath soaps. Filed by Swift & Co., Chicago, Dec. 19, 1944. Serial No. 477,750. Published May 1, 1945. Class 4.

415,363. Toilet soap. Filed by Renoir Parfums, Ltd., New York, Jan. 3, 1945. Serial No. 478,189. Published May 1, 1945. Class 4.

415,373. Toilet soap and shaving cream. Filed by M. de Tuvache, New York, Jan. 12, 1945. Serial No. 478,540. Published May 1, 1945. Class 4.

415,388. Toilet soaps. Filed by Ivor Rich, New York, Jan. 22, 1945. Serial No. 478,903. Published May 1, 1945. Class 4.

415,394. Toilet soap. Filed by Colgate-Palmolive-Peet Co., Jersey City, N. J., Jan. 26, 1945. Serial No. 479,031. Published May 1, 1945. Class 4.

415,399. Insecticides. Filed by Rocket Products Co., Clayton, Mo., Jan. 26, 1945. Serial No. 479,050. Published May 15, 1945. Class 6.

415,400. Insecticides and fungicides. Filed by Stauffer Chemical Co., San Francisco, Jan. 27, 1945. Serial No. 479,098. Published May 15, 1945. Class 6.

415,402. Chemicals and insecticides for spraying and dusting purposes. Filed by Central Chemical Corp. of Maryland, Hagerstown, Md.,

(*Turn to Page* 86)

ONE OF 19 DOW CHEMICALS USED BY THE SOAP INDUSTRY

they put it in writing!

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Methocel has a knack for pointing out easier ways to do things. Example? Ask the pencil manufacturers! Here's how Methocel helped them simplify the preparation of colored crayon pencil leads:

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Today Methocel is the most widely used colored crayon thickener and binder. The wax and coloring matter are simply incorporated into a thick Methocel solution or paste, and leads of smooth, even quality result.

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CHEMICALS INDISPENSABLE TO INDUSTRY

RAW MATERIAL MARKETS

As of October 4, 1945

ALTHOUGH the fats and oils supply situation has not improved materially in the past month, the outlook is considerably brighter what with the lifting of a number of restrictions affecting the soap maker's use of fats and oils and reports of the arrival and crushing of Philippine copra in the United States. But the arrival of this oil is scheduled for well off in the future. Highlighting the existing seriousness of the fats and oils situation was the action of the OPA in increasing the bonus on collection of used fats. Housewives are now to get four rather than two red points for each pound of used fat turned in.

Actions on the part of government agencies during the past month which had the effect of brightening the outlook for, if not actually increasing the supply of, fats and oils, included: the advancing of fats and oils quotas, effective Oct. 1, from 74 to 78 per cent, for manufacture of packaged and bar soaps for civilian usage. No change in fat and oil quotas has as yet been announced for the manufacture of bulk soaps. The reason behind the increase in the fats and oils quotas for package and bar soaps was indicated by the Department of Agriculture to be the cancellation of numerous Army and Navy orders and the release from government stock piles of fats and oils which no longer need to be kept in such large quantity. Another encouraging development along the line of easing of restrictions was the release of an additional quantity of lauric acid oils to the soap industry for the fourth quarter. Fourth quarter allocations of lauric acid oils for soap makers will be fifty million pounds as compared with half that amount during each of the first three quarters of the year. This is being attributed to the fact that prospect of receiving fairly large shipments of copra from the Philippines within the course of the next few months has made the U.S.D.A. take a more optimistic view and it is now willing to release a larger share of its stockpile of high lauric acid oils. Already there is a report that copra has been landed on the Pacific coast, crushed there, and the oil now on its way east.

In addition to the government actions mentioned above, another important announcement concerning oils

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Yes, those easy-going, order-taking days are over — the competitive race is on! And if you are a consumer of fatty acids or related products, this means that to get *your* share of postwar profits you must have ready access to a dependable source of materials of controlled quality and purity

Well — throughout the war, HARDESTY's research chemists were patiently creating new materials . . . materials of such revolutionary character that they will replace, at less cost, many of the prime materials formerly imported. HARDESTY has no reconversion problem and our "stepped-up" production and improved manufacturing facilities are your assurance of top quality, specially-processed products when you — and your customers — need them most.

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was issued by the U. S. Department of Agriculture late in September. Termination of five War Food Orders: 53, controlling red oil deliveries; 87, controlling fatty acid inventories; 129, controlling deliveries of stearic acid; 136, controlling tall oil deliveries and 137, allocating castor oil was announced in the release, all effective Oct. 1. Reason for the terminations was the ending of the war enabling the military services to terminate many of their contracts and to reduce others which require strategic raw materials.

Another direction from which soap makers may experience relief is tallow. An amendment to WFO-67, signed Oct. 2, and effective immediately, abolished the system of preferential certified orders for non-soap users of inedible tallow and grease. Previously, this order required that suppliers of inedible tallow and grease give preference, up to 50 per cent of each month's deliveries, to "certified orders" from non soap users. The 60 day inventory reductions of WFO-67 are not believed to have been modified in the latest amendment. Thus, the provision that users' inventories of inedible tallow and grease shall not exceed one-third of the quantity used during the last six months of 1944, is still in effect.

Charles E. Lund, chief of the Fats and Oils Unit, Bureau of Foreign and Domestic Commerce, writing in the Oct. issue of *Domestic Commerce*, monthly publication of that Department, points out that the end of the war with Japan and cutbacks in military demands have substantially improved the United States' fats and oils picture for civilian consumers, but these products will be among the last freed from all Government restrictions. He went on to say that V-J Day brought about a complete reversal of previous estimates that there would be no significant improvement in the U. S. civilian fat situation prior to mid-summer of 1946. He states: "As military soap needs decrease and with controls over soap materials other than fats and oils already relaxed, it is likely that more soap will soon be available. In addition to military cutbacks, termination of lend-lease on V-J Day makes available further supplies of fats and oils on the United States' market if other arrangements are not made. Exports under lend-lease accounted for 1,246 million of the 1,500 million pounds shipped abroad to all destinations last year."

Prices on tallow, grease and lard, in Chicago, continue to remain at ceilings, it was reported late in September, and packers there say there has been little change in the situation recently. Production of lard and rendered pork fat is restricted by the large number of spring pigs in the receipts at leading markets. The spring pigs are lighter in weight than the old crop because of the inability of some farmers to get corn. With all this as background, official reports indicate that there is little likelihood of rationing of fats and oils being ended before the end of the year because of the world shortage that can only be relieved by imports of vegetable oils from the far east. Relief from an unexpected source might come with a revival of

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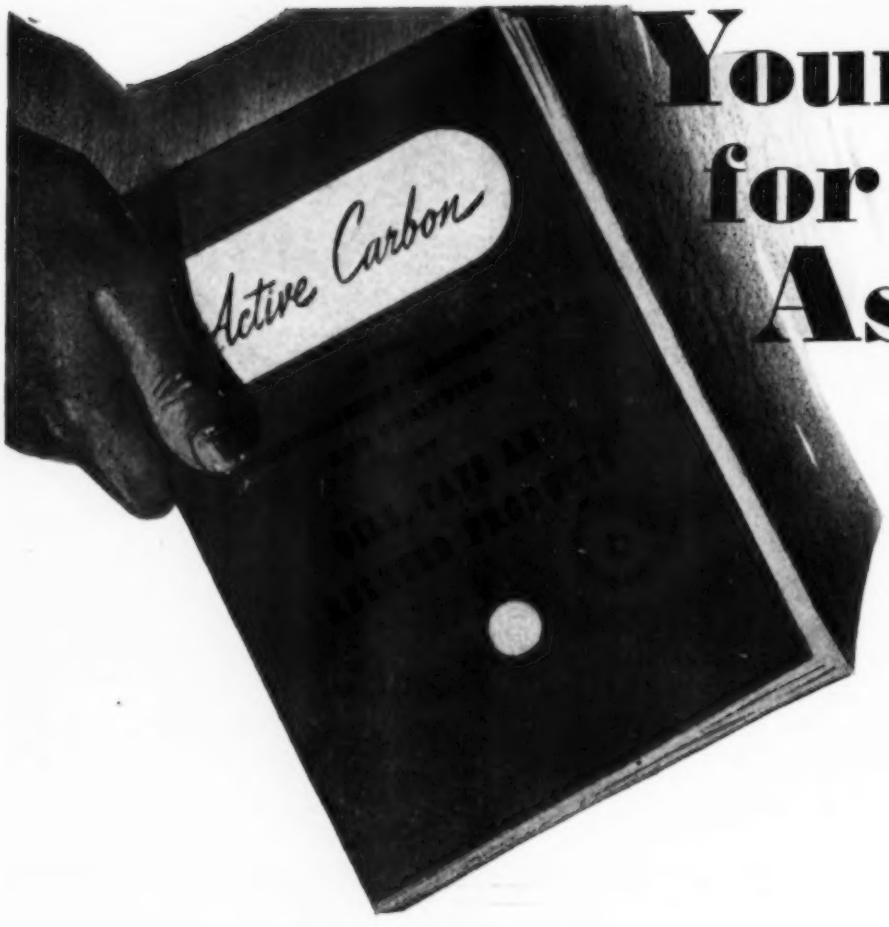

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PRODUCTION SECTION

Continuous Soap Processes

THE classical soap-boiling process is still the usual method of manufacture, but much work has been done, and is still being done, on continuous saponification processes. The principle is to mix the caustic lye and the fat stock in the necessary proportions and to feed this mixture into specially constructed vessels.

The difficulty of continuous processes lies in the problem of adjusting the alkalinity to the right degree. A small deficiency of alkali will produce a soap with poor keeping qualities and an excess of alkali will have a bad effect on the skin and on fabric. Automatic pH control during the process may overcome this difficulty.

An interesting process for saponifying neutral fats with caustic alkalies or carbonates is described in U. S. Patent No. 1,918,603. The fats are saponified with alkali in a current of steam under low pressure, which facilitates saponification and mixing, and causes the liberated glycerine to be volatilized. The process is carried out in the absence of air.

A continuous process for soap and glycerine manufacture is described in British Patent No. 423,188. The mixture of saponifiable oil and an aqueous solution of a saponifying agent is forced under high pressure through a narrow zigzag tube. The tube is insulated and is constructed of steel or copper which is heated by an electrical current of about 40 volts to 280-300° C., at which temperature complete saponification takes place. It seems possible that use of copper might have a deleterious effect on the soap.

In a continuous process outlined in U. S. Patent No. 2,109,775, the ingredients are intimately blended by passage through nozzles if necessary, and the hot mixture is passed through a heated coil, then cooled and removed as a semisolid bar.

An anhydrous soap can be prepared according to U. S. Patent No. 2,096,188 by atomizing the unsaponified fat-lye mixture into a special reaction chamber, where it meets a continuous stream of super-heated steam which brings about saponification.

Rapid Saponification

The so-called rapid saponification method of Schaal and that described in U. S. Patent No. 1,831,610, are based on the findings of J. Davidsohn that most fats and oils can be saponified completely within 2 hours in the absence of salt, if the strength of lye and the temperature are correctly chosen. The process resembles the semiboiled process. It requires refined fats and oils, a concentrated lye and a sturdy crutcher, and gives a soap with a moisture content of 20 per cent which can be milled to toilet soap without previous drying, according to Schaal.

Clayton Process

In the Clayton process described in U. S. Patent 2,249,676 and 2,343,829, fats and lyes at a concentration of 30-50 per cent, are mixed by proportioning pumps at temperatures below the boiling point, usually about 180° F. Both materials are preheated to about 300° F. They are mixed by a premixer and further by a rapidly rotating agitator before entering the reaction zone. The saponification is usually performed in two stages. A high-pressure pump forces the mixture through a reaction coil at about 420° F. and a pressure of 250 pounds per square inch. Saponification is completed in a second identical coil at the same temperature and pressure, and the resultant product is piped at 550° F. and 50 pounds per square inch to a jacketed vacuum chamber. Glycerine and water are flashed and condensed in a separate system of tubular condensers. The molten soap flows to the bottom of the chamber, is cooled without contact with the atmosphere, and a friable soap is produced. The soap is hydrated to the desired degree, and if sprayed, is more readily soluble than a conventional soap.

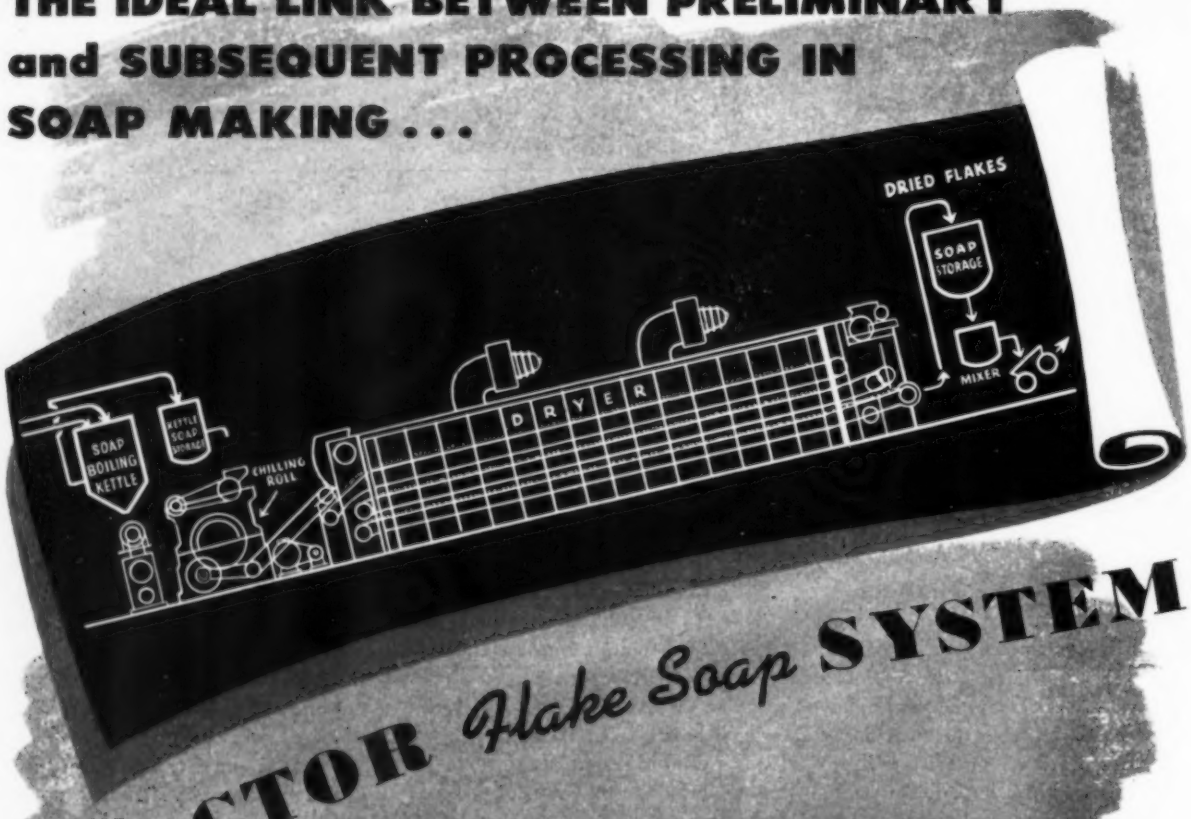
In U. S. Patents 1,874,388 and 2,136,283, saponification is completed in the spraying nozzle, or in a specially designed dispersion mill operating at the high speed of 5,000 feet per minute, which is able to disintegrate any occlusions of unsaponified fat and oil. In neither case is the glycerine recovered.

U. S. Patent 2,084,446 describes the manufacture of soaps and glycerine in vacuo. Saponifiable oils and fats are split rapidly and economically under reduced pressure. The exact quantity of alkali required for saponification is used. This gives a neutral soap in a single operation. Practically pure glycerine is obtained free from caustic soda, salt or other inorganic impurities. Substantially all of the glycerine is recovered from the soap residue by distillation under vacuum.

Use of Esters

A completely new type of saponification suitable for continuous application is described in U. S. Pat-

THE IDEAL LINK BETWEEN PRELIMINARY and SUBSEQUENT PROCESSING IN SOAP MAKING . . .



PROCTOR *Flake Soap* SYSTEM

The modern Proctor Flake Soap System really provides the ideal link between preliminary and subsequent processing in the manufacture of soap, in many ways. Not least among these ways, is the perfect uniformity of the flakes produced by this efficient, automatic system. You know how important it is to the ultimate quality of the finished soap, to have uniformly dried flakes of unvarying thickness. With this Proctor system you will find that every factor affecting flake quality and drying can be accurately controlled. The speed of operation of the chilling rolls, temperatures of chilling rolls and in the dryer, ribbon width, speed of conveyor in the dryer . . . all can be easily and accurately adjusted to suit varying conditions. Then, too, the speed with which this system produces these flakes goes a long way to increasing the efficiency of the production line. The capacity and rate of speed can be suited to your individual production requirements. The efficiency made possible with this automatic system reduces production costs to a new low. Inquire about how this system can fit into your manufacturing process. You'll be doing yourself a favor. Write today.

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ent 2,271,619. Neutral fats are methylated by alkaline methyl alcohol, glycerine is separated and the methyl fatty esters formed are saponified.

Use of alkali hypochlorites in combination with caustic potash is patented in German Patent 704,880.

Fatty Acids with Resin

Fatty acids with a residual percentage of resin are especially suitable for continuous saponification, since they combine with the caustic soda at a low temperature. A possible process would be to add the amount of caustic soda sufficient to saponify 90 per cent of the fatty acids. The remaining 10 per cent would be saponified with strongly alkaline soap builders such as metasilicate, added in such a quantity that the ratio of $Na_2O:SiO_2$ is transformed into 1:2.5 after the saponification is completed. By this method the fatty acids would be completely saponified and surplus alkali rendered harmless, at least for common household use.

The same idea could probably be applied to fats by first saponifying the fat with a surplus of caustic and neutralizing surplus caustic with a slight surplus of pure fatty acids. These could be neutralized in turn by addition of an alkaline soap builder such as metasilicate.

The problem of producing salted-out curd soap by a continuous process is not entirely solved. Modern centrifugal methods will probably help, as in the Sharples process—U. S. Patents 2,300,351, 2,300,750, 2,302,382, 2,321,947, 2,335,457, 2,336,893 and 2,348,855. J. Davidsohn and A. Davidsohn. *Industrial Chemist* 21, 414-6 (1945).

Detergent Improvement

The sudsing and detergent properties of a water-soluble salt of an alkyl sulfate containing 8-18 carbon atoms, are improved by a suitable content of unsulfated higher fatty alcohol. The alcohol should be saturated and should contain 8-14 carbon atoms. The proportion of alcohol may be 12-63 parts to 100 parts of water-soluble detergent salt. W. S. Martin, to The Procter & Gamble Co. Canadian Patent No. 429,024.

Future Demands for Glycerine

Some idea of the postwar demand for glycerine may be had by estimating the outlook for those commodities which consume glycerine. The prewar consumption distribution for the year 1941 was as follows:

Product	Thousand pounds	%
Synthetic resin and ester gum	40,234	23.0
Tobacco	25,793	14.7
Dynamite and nitroglycerine	30,624	17.5
Cellulose films and meat casing	18,973	10.8
Dentifrices and toilet articles	11,313	6.5
Drugs and pharmaceuticals	10,874	6.2
Gaskets and cork products	8,019	4.6
Printers' rollers and supplies	5,047	2.9
Margarine, shortening and other edibles	4,057	2.3
Adhesives	2,871	1.6
Textile processing	2,827	1.6
Beverages, flavors, candy, gum	2,411	1.4
Glassine, greaseproof and vegetable parchment	2,003	1.2
Rubber processing	1,802	1.0
Cleaning materials	1,589	0.9
Paper other than glassine or greaseproof	1,540	0.9
Manufacture of chemicals	1,408	0.8
All other uses	3,743	2.1

The largest use of glycerine is in the manufacture of synthetic resins and ester gums which, in turn, are used mainly for protective coatings. An increased demand for alkyl phthalates can be anticipated from this field, as well as from the field of waterproof and mildewproof coatings for civilian fabrics after the war. The clearing of devastated cities and harbors, as well as highway construction, can be expected to maintain a high demand for explosives.

Use of transparent cellulose film for packaging fresh meats and fish was on the increase until curtailed by the war. A larger consumption of glycerine through this channel can be expected when it is again available for all wrapping purposes.

Expanded medical and hospitalization plans will probably require more drugs and pharmaceuticals. The cosmetic industry also can look forward to a growing market. The aggregate consumption for minor uses represents a very substantial amount of glycerine. Most of these uses are well established and future demand from these sources is assured.

From the above it appears that the postwar demand for glycerine will equal or exceed that of the prewar period. *Chem. Industries* 56, 967 (1945).

Mixed Soap and Synthetic

A washing agent consists of a water-soluble soap, a water-soluble salt of a sulfonated mineral-oil extract, and a salt of either tetraphosphoric acid, pyrophosphoric acid, or metaphosphoric acid. The proportions are preferably 40-60 per cent of soap, 40-5 of neutralized sulfonate, and 10-40 per cent of phosphate. R. B. Colgate and E. E. Dreger, to Colgate-Palmolive-Peet Co. Canadian Patent No. 428,368.

Razor Containing Soap

A razor is designed with a hollow handle to contain a bag of shaving soap, with a blade holder at the end of the handle having a bore communicating with the hollow handle. At one end of the handle is a pump adapted to compress air in the handle against the bag, so that the soap will be forced on to the blade holder. Means are provided for controlling the quantity of material ejected, and for relieving air pressure within the handle. A. E. Keene. Canadian Patent No. 427,136.

The Nature of Active Carbon

Active carbon possesses various species of active centers which are produced by the treatment during activation. Because of this carbons exhibit specific adsorptive powers for various substances. Many times one adsorbent may be displaced by another. The over-all adsorptive power of the parent carbon is a function of the quantity and ratio of the different species of active centers. Experimental approaches to the study of this are (1) the relation of activation time and methods to the development of specific adsorptive powers, and (2) the influence of prolonged grinding, of chemical agents, and of the solvent on existing adsorptive powers. J. W. Hassler and W. E. McMinn. *Ind. Eng. Chem.* 37, 645-8 (1945).

FOR OVER SEVENTY-FIVE YEARS SUPPLIERS OF EFFICIENT SOAP MAKING MACHINES

Customers, made and held during Houchin's three-quarters of a century of service to the industry, have enjoyed the efficiency and economy of

HOUCHIN SOAP MACHINES

all over this country and in foreign lands throughout the world. These machines include equipment for making many famous brands of

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TOILET SOAPS and
SOAP POWDERS

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U.S.I. CHEMICAL NEWS

October ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1945

New Alkyd Resin for High-Gloss Baking Enamels

S & W Aroplaz 906 Is Especially Good for Whites

The first of a new line of postwar alkyd resins, S. & W. Aroplaz 906, is now being produced in major quantities for civilian applications, according to a recent announcement by U. S. I. Designed for use with either the ureas or melamines in bake coatings, or in nitrocellulose lacquers, particularly where extreme hardness and good cold-check resistance is desired, this new development is reported to be superior to pre-war alkyds.

Aroplaz 906 facilitates the production of finishes having maximum color retention. It is especially suitable for use in white, domestic-appliance finishes, such as refrigerator, stove and washing-machine enamels. It imparts high gloss characteristics and produces finishes of exceptional hardness and toughness. These finishes have excellent resistance to abrasion, water, alkalis, fats and oils.

Supplies of this new resin are not subject to restriction and are fully available for any application. Samples and additional data may be had on request.

SPECIFICATIONS	
Solution (Xylol with trace of Butanol)	49-51%
Viscosity (G.H.)	P-U
Acid Number (solvent free resin)	6-10
Color (G.H. 1933)	3-5
Wt/gallon at 25° C	8.25-8.35 lbs.

Ether, Acetone Extract Potent New Germicide

Actinomycin A, a powerful germicide found effective in dilutions as attenuated as one part in one hundred million, is particularly effective in inhibiting the growth of gram-positive bacteria.

A recent patent covers a method of extraction from a micro-organism found in soil. The method consists of extracting the culture with ethyl ether or acetone. The solvent is then evaporated, leaving a solid substance which contains Actinomycin A and Actinomycin B.

Indalone Business to Dodge & Olcott

In view of the widespread activities of Dodge & Olcott in the field of insecticides and allied products, U.S.I. has transferred its well known product, Indalone, to this subsidiary company. Indalone is now available for civilian use and all inquiries should be addressed to Dodge & Olcott, Inc., 180 Varick Street, New York, N. Y.

Most Resin Raw Materials Freed; New, Improved Products Appear

Alkyd Resins Now on Market or Under Development Offer Up to 33% Better Drying Rates, Durability and Other Characteristics

With almost breath-taking speed, after Japan surrendered, WPB lifted a majority of the controls on the raw materials used in synthetic resin manufacture and paved the way for the early introduction of many new alkyd resins. These new resins are destined to take great strides in capturing many markets that oleoresinous varnishes held, largely unchallenged, before the war. Although no revolutionary new alkyds have been developed during the war, many are available now, and more will be offered shortly, which are up to one-third better than their prewar counterparts — in speed of dry, durability, color retention, gloss retention and other performance characteristics. Equally important, many manufacturers of protective coatings and other resin-containing products have acquired new and invaluable "know-how" in the use of alkyds as a result of their government business, much of which was based on alkyd resins.

Emulsion paints and coatings have been experiencing a minor boom since before 1941. It is expected that new emulsion resins will shortly be announced which will enable the manufacturer to combine all the advantages of conventional coatings, such as good washability and waterproofness, excellent color retention and exterior durability. Here you see the colloid mill used in U.S.I.'s laboratory in the development of new emulsion resins.

Varnish Resins

Most of the prewar hard resins, the conventional modified phenolics and maleics used in oleoresinous varnish cooks, have, at least temporarily, become obsolete. Newer resins have been developed which are markedly superior in speed of bodying and speed of dry, especially, as now, when soft oils like linseed must be used. When low-cost tung oil is again available in quantity, however, the prewar resins can be expected to stage a comeback, since some types are superior when used with oils like tung.

Oils and Rosin Still Scarce

Despite the critical situation which existed on phthalic anhydride right up until V-J day, this chemical is now freely available. The same applies to phenols, formaldehyde, maleic anhydride, aromatic solvents, etc. However, there is a world-wide shortage of vegetable oils, both drying and non-drying, as a result of the critical need for these oils in food products. This shortage, and consequent gov-

(*Continued on next page*)

Stabilizes Bath Oils

Bath-scenting oils, formulated with alcohol, tend to separate in use, the oils floating to the surface of the bath water in globules. Addition of small quantities of substituted sorbitol or mannitol compounds to the solution, according to a British source, prevents this undesired separation.

Pyrimidines Prepared by Novel Process

Pyrimidines, particularly 2-substituted amino pyrimidine, an important intermediate in the preparation of 2-sulfanilamido pyrimidine, may be prepared in a new and better way, according to the claims made in a new patent assigned to one of the leading pharmaceutical laboratories.

Two methods are described. In the first, a guanidine salt, a beta-alkoxyacrolein acetal, absolute ethanol and hydrogen chloride are mixed under substantially anhydrous conditions. The solvent and excess acid are removed under vacuum, and the residue made strongly alkaline. The 2-amino pyrimidine is extracted with hot benzene.

The second method differs largely in the substitution of beta-ethoxyacrolein diethyl acetal for beta-alkoxyacrolein acetal.

By Ewing Galloway

Harvesting and handling rosin- and turpentine-containing pine gum takes a lot of manhours. It takes about two weeks to fill this cup with the "blood" which the pine tree manufactures and sends down beneath the bark to heal the "wound" made by man. Then a new wound must be made.

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October ★ **U.S.I. CHEMICAL NEWS** ★ 1945

New Resins Appear

(Continued from preceding page)

ernment use-restrictions, seem likely to continue for at least a year.

As for rosin, little hope is seen for breaking the present shortage until April or May of next year, when the new crop starts coming in. Current production is low because of the serious shortage of manpower and the large amount of manual labor involved in tapping trees and gathering the gum. Even if more manpower were available, it would not be practical now to increase the crop because the flow of gum practically stops during November and does not resume until April. In view of this, and the lack of appreciable rosin inventories in the country, little improvement can be expected in the WPB use-limitation on rosin, which, as this is written, is 60 per cent of the base period. This obviously will continue to affect the use of rosin as such, or in the form of synthetic resins.

Natural Resin Situation

Congo gum is the only natural resin of big commercial importance that is available today. Moderate amounts are now being imported from Africa. Other natural resins, such as Damar, Manila and Batu, will probably not be available in quantity for six months or longer. After that, these resins should appear at prices which will make them attractive competitors of some synthetic resins. Further, it is likely that we will see these resins in an improved form — as purified, processed products which will be far more useful than prewar natural resins.

Substitutes with a Future

It was natural to assume that the substitute resins offered during the war would be inferior to the resins they were designed to replace. Such was not always the case. One resin, for example, which turned out to be superior in many respects to the original was S & W Aroplax 1306. Offered by U.S.I. in 1943 as a civilian replacement for pure alkyd resins of the type used in architectural finishes, Aroplax 1306 turned out to be almost the equal of the pure alkyd resin in color retention and durability, and far superior to it in initial gloss and gloss retention.

Although a few of these substitute resins may stay on the job, there is every reason to believe that as resin manufacturers apply their vast wartime experience to civilian business, there will be a steady flow of new products with steadily improving characteristics. S & W Aroplax 906, described elsewhere in this issue of CHEMICAL NEWS, is a splendid example of the kind of progress expected.

New Halide Dispersing Agent for Photo Films

In a recent patent, a process for preparing amino cellulose compounds is described which is said to produce a high molecular weight amine which is water soluble, and in which the cellulose is not degraded.

Formerly, amino cellulose derivatives were prepared with harsh reagents such as caustic alkali. The result was degraded cellulose and a water-insoluble product, both characteristics being undesirable in the preparation of silver halide dispersing photographic emulsions.

In one method described in the patent, 46 parts of cellulose acetate-p-toluene sulfonate was mixed with 300 parts ethanolamine, and the mixture maintained at 50 C for three days. Nearly all the cellulose ester was reacted and dispersed in the ethanolamine. The dope was filtered and precipitated in an excess of absolute ethanol. This precipitate was leached with acetone, then extracted with acetone.

The product was found to be readily soluble in water, and to form an almost colorless, clear viscous dope.

Process Retards Fading of Rayon

Cellulose-acetate rayon fabrics, which are stored in places where coal gas is burned, exhibit a marked tendency to fade. This fading diminishes the value of the fabrics, particularly when it is bolted, as only the exposed edges fade, leaving an uneven color.

A British patent describes a treatment designed to minimize such fading. NN'-diphenylacetamidine is pebble-milled with water and a condensation product of beta-napthalenesulphonic acid and formaldehyde. This dispersion is diluted with water or ethanol, and the cellulose-acetate rayon, dyed with 1:4:5:8-tetraamino-anthraquinone, is immersed in NN'-diphenylacetamidine dispersion.

When treated and untreated samples of fabric were exposed to the action of coal gas for ten hours the untreated sample was faded and dull, while the treated sample had not changed color appreciably.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

New type fabrics for use in clothing, as automobile upholstery, in hosiery, hats and so on, is promised by a new electrostatic coating process. USI **(No. 984)**

A dry ice liquefier, to transform solid carbon dioxide to the liquid form, is described as having five times the capacity of any other high-pressure liquefier, and to take full sized blocks, thus saving labor of crushing and evaporation losses. USI **(No. 985)**

A plasticizer extender, for use with cellulose acetate, is said to also improve the heat and light stability and the flexibility of ethylcellulose plastics. USI **(No. 986)**

Effective mildewproofing is claimed for very low concentrations of a patented organo-mercuric compound. It is specifically intended for bacteriostatic and fungistatic treatment of fabrics, paper, leather and similar products. USI **(No. 987)**

More compact polarizing microscopes are announced for production within a short time by a leading producer of optical instruments. Changes include new type crystals, which permit the omission of the astigmatizing lens. USI **(No.988)**

Soldering on aluminum, stainless steel and monel metal is said to be greatly facilitated by a new flux which breaks surface oxides, thus providing more permanent bonds. USI **(No. 989)**

An insulating paint, designed to reflect light and heat from its bright aluminum surface, is offered for use on roofs. The asphalt content of this paint is said to give it a high degree of water resistance. USI **(No. 990)**

A plastic upholstery material is claimed to be resistant to moisture, perspiration, crack, wear, acid and alkali, and to be washable. A variety of colors and finishes is available. USI **(No. 991)**

Metallised glass, which gives a luxurious effect to bottles and similar containers, is suggested as being of particular interest to consumer-goods manufacturers who want to improve the appearance of their packages. USI **(No. 992)**

A refractory cement, for setting and repairing fire brick, comes in powder form, is thin-mixed on the job, and is described as withstanding high temperatures, as going from 20 to 30 per cent farther, and as being storable without deterioration. USI **(No. 993)**

A new adhesive, used to adhere acetate sheeting to paper surfaces, is described as a cold water, flexible glue that forms a bond so tight the paper surface will tear before the adhesive separates. USI **(No. 994)**

Synthetic benzoin, announced as equal to the natural product, and up to 100% pure, is offered in commercial quantities. USI **(No. 995)**

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PRODUCTION Clinic

By DR. E. G. THOMSSEN, PH.D.

IN a recent morning's newspaper, I was amused at a caricature which illustrated a big job chasing a small man during wartime and the reverse condition depicted now that peace is with us again. While none of us desire to see unemployment, it is a big relief to realize that the mad scramble to obtain a sufficient supply of common labor is righting itself. The conditions which pertained in recent years were not only unhealthy for the employer but for the employee as well. Both were going at too high rate of speed. A slowdown, as peace conditions progress, must evenutally result in general improvement all along the line.

The supply of labor being sufficent to meet the demand, however, is not the whole story. The correction of the supply disruption of the labor market is only one phase of the readjustment period. Plenty of other labor problems will have to be coped with. Some of these have to do with labor and management, some with the return of war veterans to regular employment, some to payment of unemployment allowances and some to the readaptation of labor to new peacetime pursuits and conditions. It will take months to get back to anything even remotely resembling a pre-war basis.

While the above applies to factory and common labor most forcibly, the employment of scientifically trained men will be even more of a problem. These men must be educated, not merely trained by experience. It takes several years to educate them. Anyone

who has visited our colleges in the last four or five years has been surprised at the dearth of regular male students. Besides this, many of those who already had their educational training, have been engaged solely in military operations rather than adapting their education to their chosen fields of endeavor. In performing such work they have gotten out of step as far as production methods in regular industry are concerned. To get started again in peacetime pursuits will require months of readjustment to new duties.

There is already a vacuum for men to direct the technical end of a business. This has been brought quite forcibly to our attention on several occasions in recent months. Numerous requests for technical men have been received. Just as an example we might cite one case. A manufacturer of a well known product very recently came to us with the request that we recommend or find a chemist to take over a desirable research position with bright future prospects. Under ordinary conditions many applicants could have been found to fill the job. At the moment we knew of no one so we approached the technical director of another company with the possibility that he might know of somebody. His reply was that he had been seeking for such a man himself for several months but in vain. We pursued another usually promising direction and again ran into a stone wall.

The solution of this scarcity of scientific men is very apt to be a headache for a period of years. It is unfortunate to find such a condition, especially when the indications are that great expansion is ahead in the industries we serve. During the war times we have progressed in certain fields of science at a terrible rate. Much of this progress has been made through the efforts of personnel from colleges and universities. It is improbable that they will leave teaching positions in large numbers to go into industry. Some of the research has gone on in government laboratories. This work, however, is largely in specialized fields and again government men do not easily switch positions. It is then necessary to find or make men for such positions through emergency means. Many younger men have received more specialized education in the armed forces than under normal conditions. They are eager to find their places in a peacetime economy. It may be that by accelerated education in the sciences we will close the gap left by four years of warfare. One thing is certain and that is that, as business again becomes normal, there will not be an oversupply of technical men for quite some time. As the jobs of many factory men and women are dependent upon one scientific man, it is imperative that this lack be corrected as quickly as possible.

Rotary Pumps

The name Blackmer on rotary pumps is a name one sees very frequently in various plants. In many cases such pumps have given continual service and sustained capacity for twenty years or more. The reason for this is that the pump buckets, also

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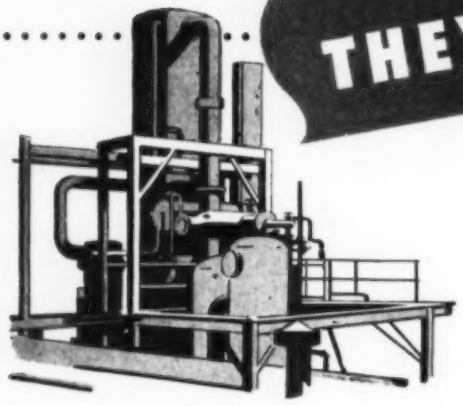

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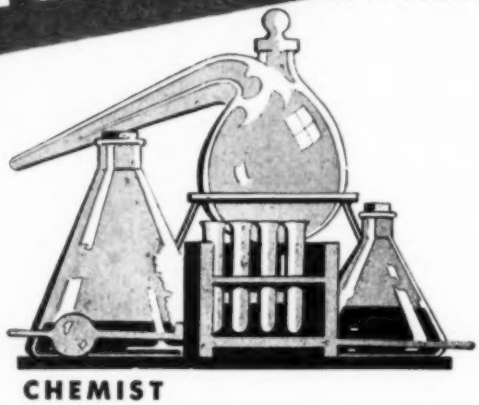

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called swinging vanes, compensate for any wear and thus maintain the capacity of the pump as it is used over many years. These buckets themselves are inexpensive and may be quickly replaced when worn out. In making this statement we speak from long plant experience with these pumps which we used to handle soap, glycerine lyes, stock dips, kerosene, salt brine and other liquids. One pump we have in mind was installed in 1916 and the last time we saw it, was still operating satisfactorily.

In addition to the wear compensating, easily removable buckets, Blackmer rotary pumps have other features that recommend them. Some of these are removable pump liners which make it unnecessary to purchase a new pump when corrosive or mildly abrasive liquids are handled. In thus lining a pump no fitting of buckets is necessary as these are self adjusting. Built-in relief valves, which positively by-pass the entire capacity of the pump, protect it against injury. The sleeve bearings and glands stand pressures up to 100 psi and are designed for rigidity and freedom from shaft distortion. They are located away from the material pumped so as not to contaminate it with oil or grease, for example. The stuffing box glands may be easily removed. The pump usually rotates clockwise with intake on right facing the pump from the power end of the shaft, but may be reversed in motion upon request. Steam jacketed heads and reduction gears may be provided if desired.

Blackmer Pump Co.'s 40 page catalog giving the locations of their numerous branches, describing their numerous types of pumps and giving valuable engineering data, is available by writing to Grand Rapids 9, Mich.

Semi-Liquid and Paste Fillers

The Filler Machine Co., Philadelphia 25, Pa. is well known as a builder of filling machines for filling semi-solid or semi-liquid products like soaps, greases, cosmetic creams and paints into glass tin or other containers. They make numerous types and sizes of fillers, many of which are built to fit individual requirements. Their machines operate by measuring out exactly a predetermined quantity of the substance to be filled with each cycle of the machine. This measuring is accomplished by the use of an adjustable piston and three way valve. The length of the piston stroke which adjusts the amount deposited is easily made with a small hand wheel. When a change over to another product is required, the machines are easily cleaned and readjusted. All parts contacting the product are made from non-corrosive metals. Special filling nozzles can be furnished for producing smooth tops on filled products. Various automatic stirring devices for products which separate are available.

Cutting Steam Costs

The American District Steam Co., of North Tonawanda, N. Y. features its line of Adsco steam control and steam saving products in a recent bulletin. These include such items as expansion joints, tile conduit for underground lines, steam separators, traps, flow meters and heat exchangers. With the impending scarcity of fuel for a period ahead, it may result in economy to investigate such products as this company makes.

Labeling Machines

The Edward Ermold Co., New York, makes a very complete line of mechanical labeling machines to label any kind of package. Their labelers have been known for over 50 years and during that time the company has developed many different types, especially machines for quantity production.

The New Ermold Labeler is one of the most frequently used labelers. Its popularity is due to its capability of applying one, two or three labels at one operation by means of a smoothly operating, reliable piece of mechanism. One operator readily handles up to 48 bottles a minute in sizes from a fraction of an ounce up to one gallon. The machine requires but little floor space and is mounted on casters so it may be easily rolled to various localities. It does not require an expert mechanic to operate. The machine is simple in construction so that in changing parts for new size labels or bottles as necessary, these attachments may be easily and quickly adjusted. It is possible to use a wide, range of label sizes. This semi-automatic machine will save much labor in many plants, but for larger runs the company make full automatic labelers.

Small Filter and Filler

Small manufacturers, as well as larger ones, are often confronted with the problem of filtering and filling smaller size batches of liquids. Hand operations and filtering racks are too troublesome or expensive in many cases. Those in such a predicament will find it advisable to consult with The Filter Paper Company, Chicago 16, Illinois. This company makes disc filters of smaller capacities though they also make plate and frame filter presses for greater capacities.

Their No. 185 Filco Disc Filter has a capacity of filtering 300 gallons of water per hour at 25 lbs. pressure yet is only 12 inches in diameter. It is a convenient, practical, well made piece of equipment mounted on a floor stand so it may be easily moved from place to place.

The Filco Syphon Fillers consist of a sturdy iron, glass lined, trough which will not rust. This trough is mounted on an adjustable stand for various sized bottles. These containers may vary in size from one-half pint to one gallon. A float valve maintains a steady liquid level in the trough and the only change necessary for different size bottles is to change the spouts. Fittings and spouts are furnished in various kinds of metal.

Further information regarding the above equipment as well as a line of tanks, conveyors, mixers and other liquid handling equipment is available upon written request.

Fatty-acid Determination

With samples of palm oil, peanut oil, etc. it was shown that the surface tension, measured by the falling-drop method of benzene solutions in 0.1 Normal sodium carbonate solution, falls sharply with the formation of free fatty acids. The method was considered suitable for determining small amounts of free fatty acids. R. Dubrisay and M. J. Goeffroy. *Lait 22*, 209-18.

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PRODUCTS AND PROCESSES

Solid Cleaning Agents

Cleaners may be prepared in cake or tablet form from a mixture of crystallized sodium metasilicate, anhydrous sodium carbonate, and china clay to which is added sufficient water to cause the mixture to set to a solid mass. E. Stern. British Patent No. 557,593.

Floating Soap

To the fluid mass of soap add sodium bicarbonate and distribute by mixing. The reaction between the bicarbonate and the acid in the soap will cause sufficient carbon dioxide to be scattered to make the soap buoyant. C. W. Kelley. U. S. Patent No. 2,371,175.

Sodium Perborosilicate

Sodium perborosilicate is a washing and cleaning agent, and may be mixed with powdered soap and soda ash for a combined washing and bleaching agent. The perborosilicate is produced by mixing: 38°Be caustic soda 6 parts, 36°Be sodium silicate 22, and borax 28 parts by weight. This mixture is then added to 36°Be sodium silicate 22 parts, and 30 per cent hydrogen peroxide 22 parts by weight. The combined mixture is stirred vigorously until it becomes gelatinous. After drying in a drier at 70-80°C., or for several days in air, the mass is finely ground. J. G. Spiegler. U. S. Patent No. 2,367,971.

Aqueous Green Soap

The substitution of an aqueous solution of green soap for tincture of green soap in general Army medical use is recommended in an Army publication. In addition to effecting a saving of alcohol and money, use of the aqueous solution has certain clinical advantages over the tincture. For example, the aqueous solution offers far superior detergent power as compared to the alcoholic preparation. It is more alkaline, and almost all bacteria that infect the skin grow best on the acid side. *Bull Assoc. Am. Soap & Glycerine Producers*, Sept. 1945.

Hand Soap

A hand soap can be prepared from 18 parts of yellow laundry soap, 32 parts of 30-mesh bagasse ash, and 50 parts of water. The soap is dissolved in boiling water and the ash added. The bagasse ash is a mixture of oxides and silicates of various metals. J. D. Compain. U. S. Patent No. 2,373,460.

Upholstery Cleaner

A cleaning fluid for rugs, upholstery etc. is made from: diglycol stearate 10 pounds, water 22, Stoddard solvent 10, carbon tetrachloride and naphtha 16.5, deodorized hydrocarbon solvent having a boiling range of 379-468° F. 3.5 gallons, soap 13, and wood flour 192 pounds. G. H. Edwards, to Benjamin Hulsh. U. S. Patent No. 2,364,608.

Detergents from Tall Oil

Light-colored products useful as detergents are prepared from crude tall oil in various states of purity by treating the product with anhydrous stannic chloride. This treatment even of unsaturated acids, causes no noticeable chemical change in the fatty material. Variations in the process, temperature limitations, products adaptable to the process, and uses of the products obtained, are discussed. J. E. Mitchell, to Colgate-Palmolive-Peet Co. U. S. Patent No. 2,371,307.

New Cleaning Agents

Slime, odors, mold and limescale deposits may be effectively controlled in humidifying equipment and systems, with the aid of a new product "Oakite Composition No. 52," made by Oakite Products, Inc., N. Y. When added to water supplies in small quantities, it is said to be effective for long periods because of its highly potent germicidal and fungistatic properties. The material is a powder readily soluble in water. Another new product is "Oakite Tri-San" which is used like any cleaning agent but which deodorizes, disinfects, and cleans surfaces in one operation.

Organic Sulfonate Detergents

The nitrosyl chloride addition products of monoolefins containing 16-23 carbon atoms are treated with alkali sulfite-bisulfite mixtures to obtain organic sulfonates containing larger amounts of sulfamate radicals. The products are useful as detergents and emulsifying agents. L. J. Beckham, to The Solvay Process Co. U. S. Patent No. 2,373,643.

Powdered Soap

A mixture of saponified rosin and soap is spray-dried to a moisture content of 1-13 per cent, to yield a powdered soap free from the usual defects of rosin soaps, such as stickiness, odor and discoloration. The soap is prepared by successively saponifying with caustic soda, beef tallow 1,500 parts, coconut oil 500, and polymerized rosin 355-434 parts. Rosin such as N wood rosin, H gum rosin, WG wood rosin, or K wood rosin, hydrogenated to 65 per cent of saturation, is used. The saponification mixture containing 43-67 per cent of water, is heated to 300-320° F. in an autoclave and spray-dried at 250 pounds per square inch pressure in nitrogen, at 240° F. to the desired moisture content. The final soap contains 10-25 per cent of saponified rosin. P. R. Mosher, to Hercules Powder Co. U. S. Patent No. 2,376,499.

Hard Synthetic Waxes

Hard synthetic waxes of high melting point are obtained by the reaction of hydroxy decanoic acid with octadecyl—and hexadecyl amines. The ratio of the acid to the amine may be varied within wide limits; good results are obtained by using equivalents. The product melts at 105-10°C. It may be mixed with paraffin to improve its hardness. T. F. Bradley, to American Cyanamid Co. U. S. Patent No. 2,367,712.

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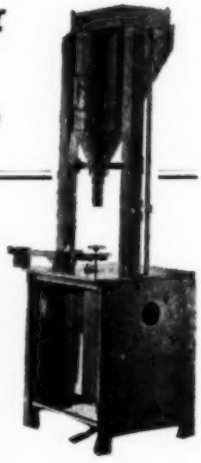

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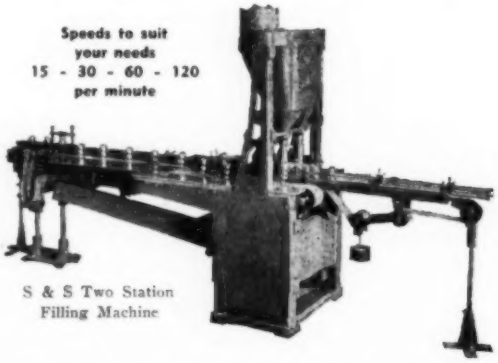

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NEW PATENTS

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PATENT AND TRADE MARK CAUSES
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Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine & Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,381,055, Purification of Glycerin, patented August 7, 1945 by Howard E. Hoyt, Stamford, Conn., assignor to U. S. Industrial Chemicals, Inc., New York. The method of purifying a concentrated glycerin solution obtained from fermentation residues and containing free acids and saponifiable matter, which comprises digesting such concentrated glycerin solution with sulphuric acid at a temperature sufficiently high to cause the sulphuric acid to react with contaminants present in the glycerin solution solution, mixing the resulting solution with a sufficient amount of an alkaline-earth metal compound to neutralize free acid present and to saponify combined acids, adding sulphuric acid to the solution of such neutralization and saponification treatment to precipitate alkaline-earth metal present as the sulphate, separating the precipitated sulphate, subjecting the remaining solution to an anion adsorbing resin to eliminate acid present therein, and finally distilling the solution to recover glycerin free from acid and saponifiable matter.

No. 2,381,082, Insect Repellent, patented August 7, 1945 by Seaphes D. Shinkle, Passaic, N. J., assignor to United States Rubber Company, New York. The method which comprises applying 4-methylquinoline-2(1)-thione to loci for repelling insects therefrom.

No. 2,381,124, Composition for Cleaning Metal such as Aluminum and Magnesium, patented August 7, 1945 by Joseph F. Hart, Los Angeles, assignor to Kelite Products, Inc., Los Angeles. A composition for cleaning such metals as aluminum or magnesium, which composition comprises an aqueous solution containing sodium salts of orthophosphoric acid and silicic acid in substantially the stoichiometric proportions of three mols of Na_2O per mol of P_2O5 and one mol of Na_2O per two mols of SiO_2.

No. 2,381,257, Insecticide Compound and Method of Dispensing an Insecticide patented August 7, 1945 by Frank Leslie Campbell and Willis Conard Ferneluis, Columbus, Ohio. A process for killing insects which comprises vaporizing the addition product of acetone and sulfur dioxide having the formula $(CH_3)2COSO_2$ and exposing said insects to the resultant vapors.

No. 2,381,368, Soap Preparation, patented August 7, 1945 by John Ross, Ramsey, N. J., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. A process of treating molten anhydrous soap which comprises extruding molten anhydrous soap through a plurality of orifices into a body of an aqueous cooling liquid, maintaining the strings of soaps so formed out of contact with each other for a time interval sufficient for cooling said strings below the temperatures of substantial conglomeration and of substantial oxidation in the presence of air and insufficient for substantially changing the shape of the soap and for more than partially hydrating said soap, and removing said strings from said body of liquid.

No. 2,382,063, Manufacture of Soap Products, patented August 14, 1945 by Floyd E. Joyce and Erik J. Lindhardt, Des Moines, assignors to National By-Products, Inc., Des Moines. A method of making a granulated soap product which comprises providing a soap in paste form and subjecting said soap, at not substantially in excess of room temperature, in a vessel having mulling rotors carried on a revolving cross-head therein, said rotors being supported so that they run slightly above the bottom of said vessel, to the action of said mulling rotors while the same are slowly revolving, the action being continued until the mass is broken down into granules due to the action of said mulling rotors.

No. 2,382,163, Detergent Briquette, patented August 14, 1945 by James Douglas MacMahon, Niagara Falls, N. Y., assignor to The Mathieson Alkali Works, Inc., New York. A detergent briquette chemically and physically stable, hard, strong and non-deliquescent consisting of a dense crystalline aggregate consisting essentially of the following constituents in proportions by weight within the respective indicated ranges: trisodium phosphate about 1 per cent to 15 per cent sodium silicate about 1 per cent to 25 per cent, sodium carbonate about 20 per cent to 50 per cent, tetrasodium pyrophosphate about 3 per cent to 25 per cent and water about 30 per cent to 40 per cent, the $Na_2O:SiO_2$ ratio of the silicate being not less than 1:1 nor greater than 2:1.

No. 2,382,164, Detergent Briquette, patented August 14, 1945 by James Douglas MacMahon, Niagara Falls, N. Y., assignor to The Mathieson Alkali Works, Inc., New York. A detergent briquette physically stable, hard, strong, and non-deliquescent consisting of a dense, crystalline aggregate consisting essentially of the following ingredients in proportions by weight within the respective indicated ranges: sodium silicate of which the ratio of $Na_2O:SiO_2$ is less than 1:1 about 1 per cent-20 per cent, total water about 30 per cent-4per cent, at least one detergent of the group consisting of sodium carbonate and trisodium phosphate aggregating from about one-fourth to about one-half the total formula weight, and tetrasodium pyrophosphate about 1 per cent to about 15 per cent.

No. 2,382,165, Detergent Briquette patented August 14, 1945, by James Douglas MacMahon, Niagara Falls, N. Y., assignor to The Mathieson Alkali Works, Inc., New York. A detergent briquette physically stable, hard, strong and non-deliquescent consisting of a dense crystalline aggregate consisting essentially of the following ingredients in proportions by weight within the respective indicated ranges: trisodium phosphate about 1 per cent to 35 per cent, sodium silicate about 1 per cent to 25 per cent, soda ash about 10 per cent to 50 per cent, total water about 30 per cent to 40 per cent, a phosphate of the class consisting of sodium hexametaphosphate and sodium tetraphosphate about 1 per cent to 15 per cent and an alkali-stable surface active agent up to about 5 per cent, the $Na_2O:SiO_2$ ratio of the silicate being not less than 1:1 nor greater than 2:1.

No. 2,382,531, Soap Manufacture, patented August 14, 1945 by Laszlo Auer, South Orange, N. J. In the manufacture of solid soaps from fatty materials by the anhydrous saponification method, the process which comprises heating the fatty material, together with rosin and a dry saponi-

fying agent selected from the class consisting of alkali metal oxides and hydroxides and alkali metal carbonates and bicarbonates, to a temperature of from 150° to 350° C., whereby to effect saponification and the production of a hard soap under conditions substantially precluding the presence of water, the rosin being present in amounts ranging from 15 per cent to 40 per cent based on the weight of the fatty material.

No. 2,383,114, Detergent Composition, patented August 21, 1945, by Truman E. De Villiers, Okmulgee, Okla., assignor to Cities Service Oil Co., New York. A detergent mixture comprising approximately 30 per cent of orthodichlorbenzene, approximately 20 per cent of ethylene glycol monobutyl ether, approximately 15 per cent of glycerin, approximately 7 per cent of water, the remainder of the mixture consisting essentially of an ethanolamine oleate soap.

No. 2,383,304, Insecticidal Mixture, patented August 21, 1945 by Robert J. Geary, Blue Point, N. Y. An insecticidal composition comprising as active toxic ingredients pyrethrins and an insecticidal product selected from the group consisting of finely-ground yam bean and extracts of yam bean.

No. 2,383,500, Polishing Compound, patented August 28, 1945 by Lincoln M. Polan, Huntington, W. Va., assignor to Albert S. Polan, E. G. Polan, L. M. Polan, Charles Polan, and Lake Polan, Jr., a partnership doing business as Zenith Optical Co., Huntington, W. Va. A polishing composition containing the following ingredients and substantially in the following proportions by weight:

	Parts
Cerium oxide	32
Barium carbonate	8
Barium hydroxide	1

No. 2,383,525, Detergent Composition, patented August 28, 1945 by Nathaniel Beverley Tucker, Glendale, Ohio, assignor to The Procter & Gamble Co., Cincinnati. A cleansing composition comprising essentially a mixture of a detergent having pronounced detergent power and selected from the group consisting of water soluble salts of organic sulfonic acids and water soluble salts of aliphatic sulfuric acid esters, and a N-acl morpholine having twelve carbon atoms in the acyl radical, the amount by weight of the N-acyl morpholine being less than the amount by weight of the said detergent but sufficient to enhance the detergent power thereof.

No. 2,383,526, Detergent Composition, patented August 28, 1945 by Nathaniel Beverley Tucker, Louisville, Ky., assignor to The Procter & Gamble Co., Cincinnati. A cleansing and laundering composition comprising essentially a mixture of a detergent having pronounced detergent power and selected from the group consisting of water-soluble salts of organic sulfonic acids and water-soluble salts of aliphatic sulfuric acid esters, and a nitrile of a fatty acid, having 10 to 14 carbon atoms, the amount by weight of the nitrile being less than the amount by weight of the detergent but sufficient to enhance the detergent power thereof.

No. 2,383,564, Insecticidal Compositions, patented August 28, 1945 by Anderson W. Ralston, John P. Barrett, and Miles R. McCorkie, Chicago, Ill., assignors to Armour and Co., Chicago. A process for treating insect infected areas comprising applying to said areas beta-hydroxy-ethylalkylamine wherein the alkyl group contains at least six carbon atoms.

No. 2,383,579, Process for Treating Fats and Fatty Oils, patented August 28, 1945 by Harold Dwaine Allen, Glen Rock, and William Ashley Kline, Morris Plains, N. J., assignors to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process which comprises heating a fatty glyceride with a monohydric alcohol having one to about six carbon atoms per molecule in the presence of an alcoholysis catalyst at a temperature above the normal boiling point of said alcohol and at a pressure sufficient to maintain a substantial proportion of said alcohol in a liquid phase, thereby providing a liquid body containing monohydric alcohol esters and glycerine; and separately recovering said esters and glycerine.

No. 2,383,580, Treating Fatty Materials, patented August 28, 1945 by Clarence Joseph Arrowsmith, New York, N. Y. and John Ross, Ramsey, N. J., assignors to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process which comprises reacting a fatty glyceride with a low molecular weight monohydric alcohol in the presence of an alcoholysis catalyst to provide a liquid body containing glycerine and esters of fatty acids from said glyceride with said alcohol, removing the influence of the catalyst, volatilizing unreacted alcohol from said liquid body, and thereafter separating the said esters from the glycerine.

No. 2,383,581, Process for Preparing fatty materials, patented August 28, 1945 by Clarence Joseph Arrowsmith, New York, N. Y. and John Ross, Ramsey, N. J., assignors to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process which comprises reacting a polyhydric alcohol with a fatty material of the group consisting of fatty acids having about twelve to about twenty carbon atoms per molecule and esters thereof in the presence of an alcoholysis catalyst and in the absence of extraneous solvent to provide a liquid body containing a fatty acid partial ester of a polyhydric alcohol; removing the influence of the catalyst; and recovering said fatty acid partial ester as a distillate.

No. 2,383,596, Method of Treating Fatty Glycerides, patented August 28, 1945 by Emil Edward Dreger, Summit, N. J., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process which comprises reacting a fatty glyceride with a low molecular weight monohydric alcohol having at least two carbon atoms per molecule in the presence of methyl alcohol.

No. 2,383,599, Treating Fatty Glycerides, patented August 28, 1945 by Glenn Ashmore Glossop, New York, assignor to Colgate - Palmolive - Peet Co,. Jersey City, N. J. A process for the alcoholysis of fatty glycerides which comprises treating a fatty glyceride containing free fatty acid with a lower aliphatic monohydric alcohol at least partially immiscible with the fatty glyceride to form two phases, separating a fatty glyceride phase containing alcohol from an alcohol phase containing free fatty acid and adding an alcoholysis catalyst to said fatty glyceride phase to produce a reaction between the fatty glyceride and contained alcohol.

No. 2,383,601, Treating Fats and Fatty Oils, patented August 28, 1945 by Gerald Inman Keim, Newark, N. J., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process which comprises treating a fatty glyceride containing free fatty acid with low molecular weight monohydric alcohol in the presence of an acidic esterification catalyst, thereafter reacting said fatty glyceride with low molecular weight monohydric alcohol in the presence of sufficient alkaline agent to neutralize any acid present and to provide an alkaline alcoholysis catalyst whereby a liquid body containing an ester of fatty acid from said glyceride with said alcohol and glycerine is produced, and recovering said ester and glycerine from said liquid body.

No. 2,383,602, Process for Treatment of Fatty Glycerides, patented August 28, 1945 by Gerald Inman Keim, Newark, and John Ross, Ramsey, N. J., assignors to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process which comprises reacting a fatty glyceride with a low molecular weight monohydric alcohol in the presence of an alkaline alcoholysis catalyst to produce a liquid body containing esters of the alcohol with fatty

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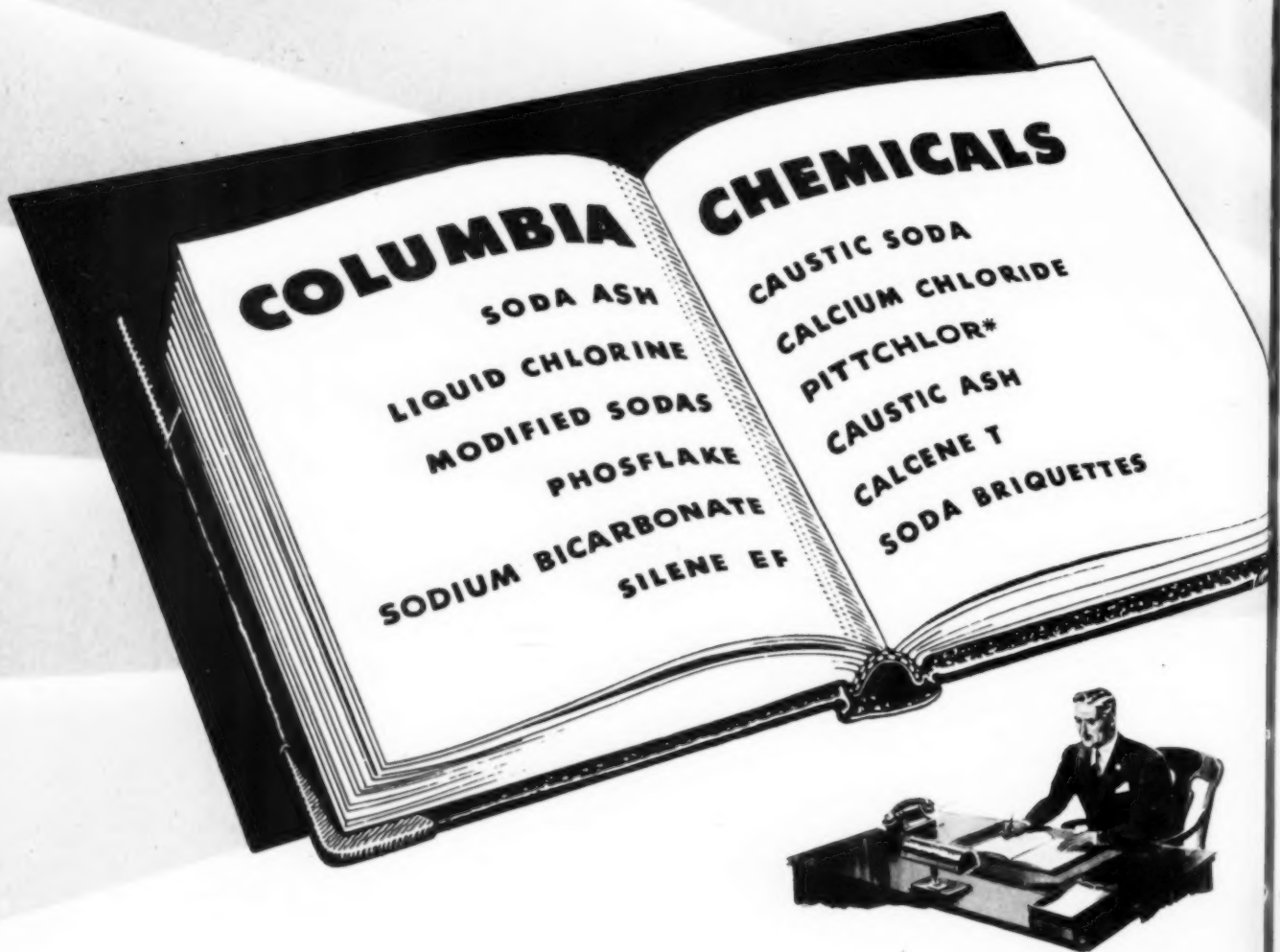

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acids from the glyceride, glycerine, and unreacted alcohol; volatizing the unreacted alcohol from said body at a temperature such that said liquid body remains homogeneous during volatilization; and thereafter separating the esters from the glycerine.

No. 2,383,614, Treatment of Fatty Glycerides, patented August 28, 1945 by Joseph Henry Percy, New York, N. Y., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. A process for the alcoholysis of a fatty glyceride which comprises reacting a fatty glyceride with a monohydric alcohol having one to about six carbon atoms per molecule to produce a liquid body containers esters, glycerine and partially reacted glycerides; removing esters and glycerine from said liquid body; and reworking the partially reacted glycerides.

No. 2,383,630, Production of Soap, patented August 28, 1945 by Walter Russell Trent, North Arlington, N. J., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process for producing soap which comprises reacting a fatty acid ester of a lower alkyl monohydric alcohol with a saponifying agent under subatmospheric pressure while maintaining the temperature above the vaporization point at said pressure of the free monohydric alcohol.

No. 2,383,631, Manufacturing Soap, patented August 28, 1945 by Walter Russell Trent, North Arlington, N. J., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. A process for producing soap which comprises continuously passing a fatty acid ester of a lesser alkyl monohydric alcohol and a saponifying agent through a mixing zone at an elevated temperature and under a superatmospheric pressure, varying the temperature and pressure in said mixing zone alternately to establish and destroy a vapor phase therein, and continously discharging said reaction mixture into a lower pressure zone.

No. 2,383,632, Process of Treating Fatty Glycerides, patented August 28, 1945 by Walter Russell Trent, North Arlington, N. J., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. A process for the alcoholysis of fatty glycerides which comprises reacting a fatty glyceride with a low molecular weight monohydric alcohol to produce a liquid body containing esters of fatty acids from said glyceride with said alcohol, glycerine and unreacted alcohol; volatilizing the unreacted alcohol from said liquid body, and separating said esters from the glycerine.

No. 2,383,633, Process for Treating Fatty Glycerides, patented August 28, 1945, by Walter Russell Trent, North Arlington, N. J., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process which comprises reacting a fatty glyceride with a monohydric alcohol having one to about six carbon atoms per molecule in the presence of an alkaline alcoholysis catalyst to produce a liquid body containing esters of the alcohol with fatty acids, glycerine and unreacted alcohol; volatilizing the unreacted alcohol from said liquid body; acidifying the residue of said liquid body; and separating the esters from the glycerine.

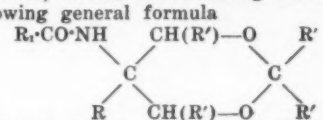
No. 2,383,737, Detergent Composition, patented August 28, 1945 by Albert S. Richardson, Wyoming, Ohio, assignor to The Procter & Gamble Co., Cincinnati. A cleansing composition comprising essentially a mixture of a detergent having pronounced detergent power and selected from the group consisting of water-soluble salts of: organic sulfonic acids, alkyl sulfuric acids, and sulfuric acid esters of polyhydric alcohols incompletely esterified with a fatty acid of high molecular weight, and an alkylolamide selected from the group consisting of ethanolamides and glycerolamides of fatty acids having twelve to fourteen carbon atoms, the mount by weight of the alkylolamide being less than the amount by weight of the water soluble salt but sufficient to enhance the detergent power thereof.

No. 2,383,738, Detergent Composition, patented August 28, 1945 by Albert S. Richardson and Walter H. McAllister, Wyoming, Ohio, assignors to The Procter & Gamble Co., Cincinnati. A cleansing and laundering composition comprising essentially a mixture of a detergent selected from the group consisting of water-soluble salts of organic sulfonic acids and water-soluble salts of aliphatic sulfuric acid esters, the said detergent having pronounced detergent power, and an amide of the formula.

$$R{\cdot}CO{\cdot}NR'R''$$

wherein R·CO is an acyl radical of a fatty acid having 10 to 14 carbon atoms and R′ and R″ are selected from the group consisting of hydrogen and alkyl radicals having 1 to 4 carbon atoms, the sum of the carbon atoms in R′ and R″ being less than 5, and the amount by weight of the amide being less than the amount by weight of the said detergent but sufficient to enhance the detergent power thereof.

No. 2,383,739, Detergent Composition, patented August 28, 1945 by Nathaniel Beverly Tucker, Louisville, Ky., assignor to The Procter & Gamble Co., Cincinnati. A cleansing and laundering composition comprising essentially a mixture of a water-soluble salt of an organic sulfuric reaction product having in its molecular structure a radical selected from the group consisting of sulfonic acid and sulfuric acid ester radicals, the said salt having pronounced detergent power, and an amide having the following general formula



wherein $R_1{\cdot}CO$ is the acyl radical of a fatty acid having 10 to 14 carbon atoms, R is selected from the group consisting of hydrogen, methyl, methylol, and ethyl, and each R′ is selected from the group consisting of hydrogen and methyl, the amount by weight of theamide being less than the amount by weight of the said detergent material but sufficient to enhance the detergent power thereof.

No. 2,383,740, Detergent Composition, patented August 28, 1945 by Nathaniel Beverly Tucker, Louisville, Ky., assigner to The Procter & Gamble Co., Cincinnati. A cleansing and laundering composition comprising essentially a water-soluble salt of an organic sulfuric reaction product having in its molecular structure a radical selected from the group consisting of sulfonic acid and sulfuric acid ester radicals, the said salt having pronounced detergent power, and an added amide, which is a derivative of a water-soluble aliphatic hydroxy carboxylic acid and an aliphatic primary amine containing 10 to 14 carbon atoms in the aliphatic chain, the amount by weight of the amide being less than the amount by weight of the said water-soluble salt but sufficient to enhance the detergent power thereof.

No. 2,383,775, Insecticidal Compositions, patented August 28, 1945 by W. E. Craig, Philadelphia, and William F. Hester, Drexel Hill, Pa., assignors to Rohm & Haas Co., Philadelphia. An insecticidal composition comprising a carrier in preponderant proportion and as an essential active insecticidal agent a benzyl dimetyhl phenyl ammonium nitrophenate.

Synthetic Glycerides

Synthetic glycerides can be formed by obtaining the free fatty acids from natural glycerides and then re-esterifying to give new, so-called "tailor-made" products. The chlorides of zinc and tin were outstanding in catalytic activity for esterifying peanut-oil fatty acids with glycerol under reduced pressure. The reaction is complex and not simply bimolecular. The catalysts may be completely removed from the esterified oils by ordinary alkali refining. They do not cause the oil to polymerize during esterification, do not cause conjugation and are not detrimental to the color of the product. R. O. Feuge, E. A. Kraemer, and A. E. Bailey. *Oil & Soap* 22, 202-7 (1945).

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Peroxides

The strength of hydrogen peroxide has been expressed as volume strength, meaning volumes of oxygen at 0° C. and 760 mm. pressure. In addition, manufacturers and users often use a figure which they refer to as cc. test. This is the number of cc. of 0.1 Normal potassium permanganate equivalent to 2 cc. of the hydrogen peroxide sample. The valuation in terms of volume strength has no practical value and might well be discontinued as a common practice. The expression per cent by volume is ambiguous, implying cc. per 100 cc. but meaning grams per 100 cc.

Now that hydrogen peroxide is sold by weight, the only common-sense method of describing strength is per cent by weight. Much ink has been spilt in argument between customer and manufacturer. This is because slight differences in specific gravity of different qualities make appreciable differences in various figures. Another reason for confusion has been that 100 volumes has been described as 30 per cent by volume. In fact true 100 volume is nearer 30.36 per cent by volume or 27.52 per cent by weight. By eliminating all except per cent by weight, the position would be clarified and hydrogen peroxide would be brought into line with other oxidizing agents, including other peroxy compounds.

Ammonium and potassium persulfates are obtained by electrolysis of the bisulfate. They have a certain limited use as bleaching agents, especially for fats and oils and for soap. They also have an activating effect in some cases on a hydrogen peroxide bleaching bath.

The perborate has the formula $NaBO_2H_2O_2,3H_2O$, and the percarbonate $2Na_2CO_6,3H_2O_2$. Both of these products are manufactured by the addition of hydrogen peroxide to the sodium salt. Sodium perborate is a crystalline powder and is usually produced as the tetrahydrate containing a minimum of 10 per cent of active oxygen, but a dehydrated product is also manufactured containing about 15 per cent of active oxygen. The latter is more suitable for high temperature conditions. Perborate is used extensively for household washing powders. It has been replaced during the war by sodium percarbonate, both in Britain and in Germany. Sodium perpyrophosphate is another per compound, used in small quantities as a bleaching auxiliary.

Benzoyl peroxide has been used for the bleaching of oils, fats and waxes. It has the property of differing from hydrogen peroxide by being non-aqueous and miscible with organic compounds. V. W. Slater. *Chemistry and Industry* No. 6, 42-6 (1945).

Soaps in Hard Water

In an experimental study a definite volume of artificially prepared hard water was titrated with soaps of different fat stocks, and the volume required to produce a stable lather determined. Results are expressed as milligrams of fatty acids or rosin in the form of soap, required to soften 50 ml. of 50 p.p.m. hard water:

Type of Hardness	Tallow	Soybean	Coconut	WW Gum Rosin
	Mg. of Fatty Acids and Rosin to Soften 50 ml. of 50 p.p.m. Hard Water			
All Ca	24.0	23.5	36.7	203.0
2/3 Ca-1/3 Mg	27.5	25.5	46.0	126.0
1/2 Ca-1/2 Mg	27.0	25.0	50.0	96.0
1/3 Ca-2.3 Mg	27.5	25.0	51.0	92.0
All Mg	29.0	26.8	53.8	91.0

For practical use tests, soaps were made from stocks consisting of tallow and of tallow plus varying amounts of rosin up to 15 per cent. The finished soaps contained 57 per cent total fatty and rosin acids. Practical water-softening tests were made in a washing machine under conditions corresponding to domestic use. Soap was added in small quantities to 15 gallons of 300 p.p.m. hard water at 125°F. with agitation in the machine until suds were formed which persisted for 45 seconds without agitation. The quantities of soaps required to soften the water under these conditions are given in the table:

Per Cent Composition of Soap Stock		*Ounces Required to Soften 15 Gal. of 300 p.p.m. Water Per Cent*	*Increase in Rosin-Tallow Soap Used Over All Tallow*
Tallow	*Rosin*		
			%
100	..	5.6	..
95	5	5.9	5.4
90	10	6.1	9.0
85	15	6.5	16.1

In general the laboratory and practical tests showed good agreement. E. E. Ruff. *Oil & Soap* 22, 125-7 (1945).

Comments on Water Softening

The lime-soda ash method of water softening can be very effective for eliminating both temporary and permanent hardness. A drawback is that it requires the attention of an expert since the exact degree of hardness must be known at all times in some uses of soft water. Also it is usually impossible to get water below three grains per gallon by this method.

Use of an alkali is widely practiced for softening water, especially if little or no iron salts are present. Alkalies most frequently employed to soften water for wet cleaning and bleaching are trisodium phosphate, modified soda, and soda ash. Using alkalies is more or less a guess method, since no great attempt is made to determine the exact amount of alkali needed. Care should be taken that not enough alkali be added to cause harshness. Sodium hexametaphosphate and sodium tetraphosphate are also used and proved efficient for removing grayness or streaks caused by hard water. The cost of this type of agent is rather high, but its use is practical when the volume of water to be softened is not too great. *Rayon Textile Mo.* 26, 299 (1945).

Grease in Waste Waters

The recovery of grease from slaughterhouses in towns in Germany with populations of 20,000 or more is discussed and the average amount of grease which can be recovered per pig or per head of cattle is calculated. The possible yield is estimated to be 0.360 kilogram per head of cattle and 0.120 kilogram per pig. *Keller. Fleischwirtschaft* 23, No. 4, 47; through *Chem. Abs.*

MAINTENANCE *pays dividends*

LEHMANN Equipment is built to "take it", however, even a battleship has to go into drydock for an overhaul occasionally. The war years have been tough on heavy-duty machines. Extra shifts — overtime — the constant drive for peak production, often with inexperienced operators and with but little attention to minor adjustments and repairs — have all taken their toll.

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Offers New Titrometer

Precision Scientific Co., Chicago, recently announced a new titrometer that determines the free and combined acidity of material in either aqueous or non-aqueous, highly colored, opaque solutions. The instrument is said to have been originated by Shell Development Laboratories primarily for determining the acidity of highly complex mixtures of lubricating oils, either completely opaque or so dark in color that the routine acidimetric color titrations could not be made. However, the titrometer has been found applicable to determine the acidity of lubricants, detergents, fats, vegetable and animal oils, waxes, greases, common solvents and other water solutions. The operation is similar to that of the pH determination. The instrument has two complete titration stands. The alternating current operated electrometer allows the use of any electrode system in aqueous and non-aqueous solutions. The calomel-glass electrode is readable to within 0.02 pH units. The titrometer is equipped with meter scales and potentiometer circuits which give a range of —1.65 to +1.65 volts readable to 0.5 millivolts.

•

Caustic Metal Corrosion Booklet

The results of recent plant and laboratory tests on metal corrosion by caustic soda and other alkali solutions are discussed in a new revision of "The Resistance of Nickel and Its Alloys to Corrosion by Caustic Alkalies," issued recently by the development and research division of International Nickel Co., New York. Many of the tests described were made by exposing the samples of the metal within equipment in actual operation. In every case the caustic concentrations and temperatures studied were selected for their direct relation to the problems faced by the commercial maker and user of caustic in various fields. The corrosion data, showing comparative results on "Monel," nickel, "Inconel," "'L' Nickel," nickel cast irons, cast iron, mild steel and stainless steels are summarized in 36 tables. Special sections are devoted to caustic soda manufacture, transportation equipment and the problems of caustic users in soap and other industries. This 20-page booklet will be sent on request to chemical engineers, operators of caustic equipment by International Nickel Co., 67 Wall St., New York 5.

•

Stokes Distributes Tablet Book

F. J. Stokes Machine Co., Philadelphia, is distributing its handbook on tablet manufacture: "Manufacture of Compressed Tablets" to officials in companies responsible for tablet production, it was announced last month. The book reviews the latest machinery available and instructs in its operation and care; includes 20 pages of typical medicinal formulae, covers both hand methods and modern production techniques, is illustrated with practical, how-to-do-it photographs, describes correct balancing of formulae; and is written in simple language for the beginner as well as the experienced tablet manufacturer.

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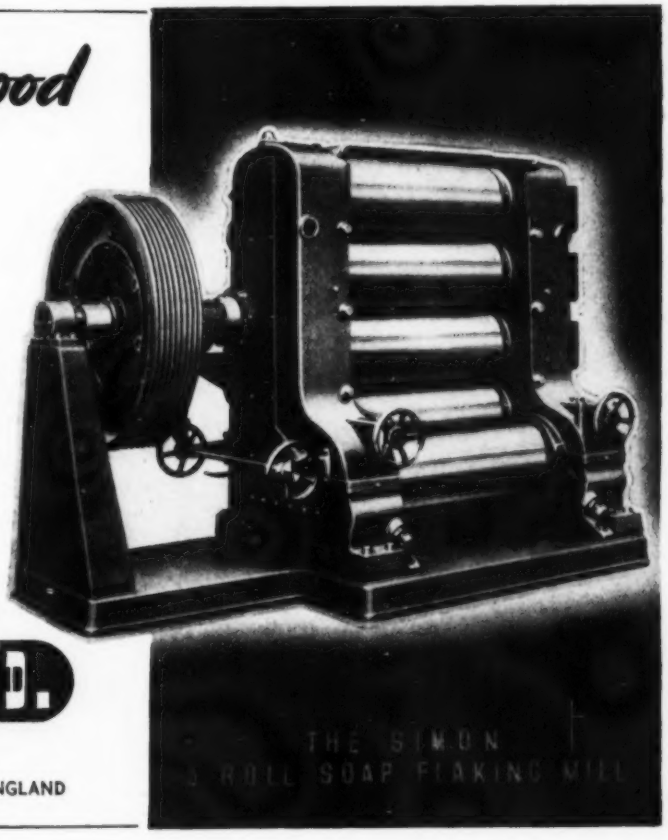

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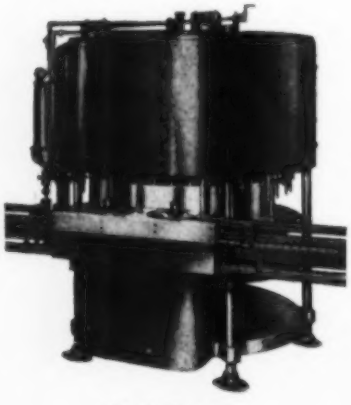

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PCA Directors Program Set

A tentative program for the meeting of the board of directors of the National Pest Control Association, scheduled for the Netherland Plaza Hotel, Cincinnati, Oct. 22-24, was issued recently by the group. Although the emphasis of the program is pretty heavily on postwar topics, a major share of the meeting time will be taken up with committee meetings. A feature of the program will be a general discussion of new insecticide raw materials. The meeting will conclude with a "round-up" session, at which time recommendations by committees on veterans, standards, safety program, etc., will be considered.

Powell Letter Discusses DDT

John Powell & Co., New York, last month issued a letter outlining some important factors to be borne in mind regarding DDT. In the main, five points were made. They covered: labels, knockdown, corrosion, caution, and definition.

RAW MATERIAL MARKETS

(*From Page 65*)

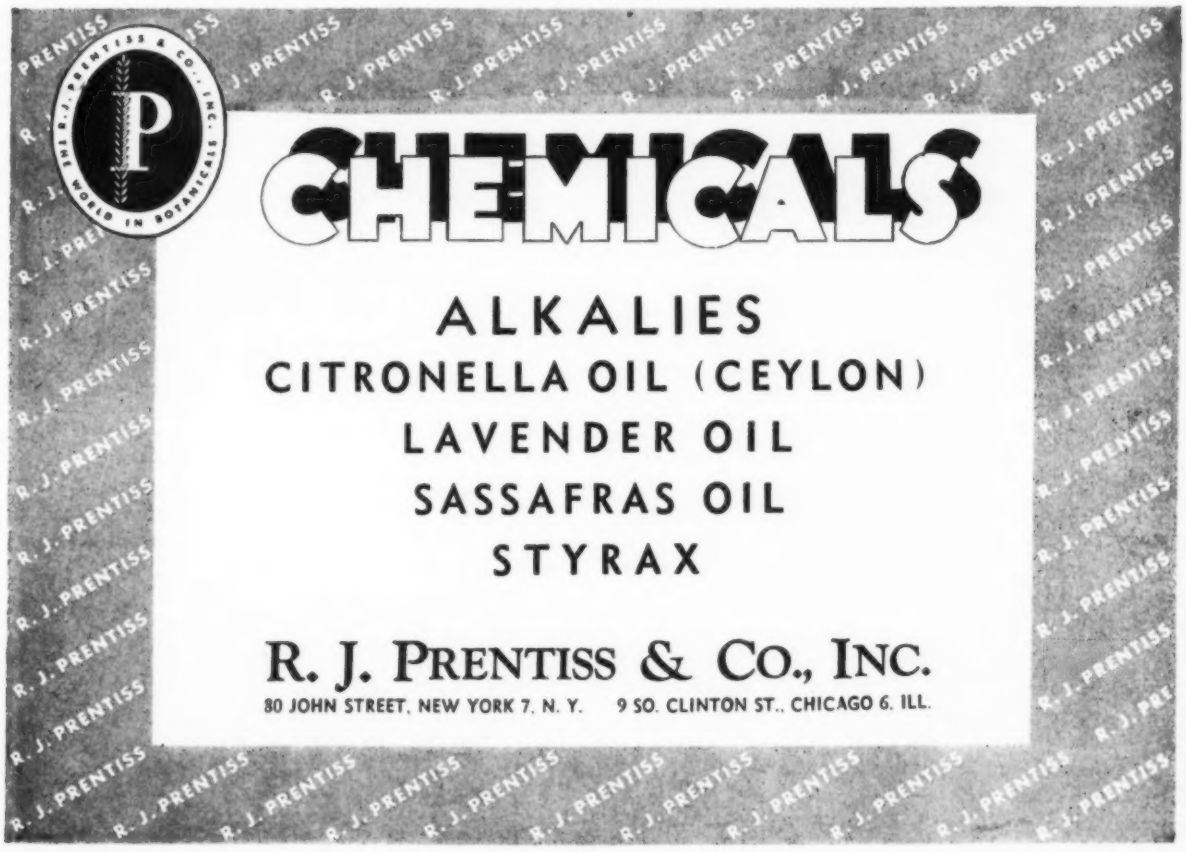
the whaling industry, which was all but abandoned during the war. This might materially aid the fats and oils situation, especially since the whale crop is believed to have grown greatly in the past five years of war.

Rosin still continues to be a "hot item," as it is referred to in WPB circles. In one WPB official's opinion it will continue to be a major national problem for perhaps two years. There has been pressure to have rosin exported where it will bring a higher price than ceilings at home will allow. However, some relief from the wartime shortage may be effected through production facilities which one producer, Newport Industries, has announced it is installing at Oakdale, La.

On the essential oil front word has been received that a decline in the price of Bois De Rose oil was registered following removal of import restrictions on it. Brazilian oil of sassafras will henceforth be known as Ocotea Cymbarum, it was learned recently in order to avoid a considerable amount of paper work and details involved in importing this item under the name of Sassafras oil.

Edlund on Nationwide Hookup

Speaking on the Union Pacific Railroad's Mutual network program, "Your America," Sept. 2, in its salute to the soap industry, Roscoe C. Edlund, manager of the Association of American Soap and Glycerine Producers, outlined the wartime role of the soap industry, explained the reasons for the soap shortage and made a plea for continued salvage of waste fats. He pointed out that "Americans use about 10 million pounds of soap a day, three and one-half billion pounds a year not only in our homes but for industrial purposes including the making of textiles, metal, leather, rubber and their products." Mr. Edlund spoke over a nationwide hookup.



TRADE MARKS GRANTED

(*From Page 61*)

Jan. 29, 1945. Serial No. 479,109. Published May 15, 1945. Class 6.

415,405. Soap impregnated paper. Filed by Velso Products Co., Burlington, Ia., Feb. 2, 1945. Serial No. 479,365. Published May 8, 1945. Class 4.

415,407. Solvent cleanser detergent. Filed by Quaker Chemical Products Corp., Conshohocken, Pa., Feb. 3, 1945. Serial No. 479,398. Published May 8, 1945. Class 4.

415,415. Shoe dressings and shoe polishes. Filed by Evangeline Products, Inc., Brooklyn, Feb. 9, 1945. Serial No. 479,617. Published May 15, 1945. Class 4.

415,416. Toilet soaps. Filed by Les Parfums De Dana, Inc., New York, Feb. 9, 1945. Serial No. 479,617. Published May 15, 1945. Class 4.

415,430. Anti-mildew agent. Filed by Rampel Chemical Co., Mt. Vernon, N. Y., Feb. 19, 1945. Serial No. 479,988. Published May 15, 1945. Class 6.

415,437. Synthetic wax for industrial use. Filed by T. G. Cooper & Co., Philadelphia, Feb. 24, 1945. Serial No. 480,165. Published May 5, 1945. Class 1.

415,615. Cleaning compound for general household and industrial uses. Filed by Trojan Products & Mfg. Co., Chicago, Jan. 26, 1944. Serial No. 466,905. Published May 22, 1945. Class 4.

415,620. Water soluble dentifrice ingredient. Filed by Pepsodent Co., Chicago, June 1, 1944. Serial No. 470,839. Published May 29, 1945. Class 6.

415,623. Preparation for cleaning, polishing and preserving floors, woodwork, etc. Filed by Barrymore Carpet Corp., New York, Aug. 14, 1944. Serial No. 473,243. Published May 29, 1945. Class 16.

415,627. Tooth paste, disinfectant and chemical rust preventives. Filed by Ludwig Scherk, Inc., New York, Aug. 30, 1944. Serial No. 473,752. Published May 22, 1945. Class 6.

415,628. Tooth paste, disinfectant, and chemical rust preventives. Filed by Ludwig Scherk, Inc., New York, Aug. 30, 1944. Serial No. 473,753. Published May 22, 1945. Class 6.

415,629. Cleaning and polishing preparation for floors. Filed by Carsello Chemical Products, Chicago, Sept. 15, 1944. Serial No. 474,226. Published May 15, 1945. Class 16.

415,644. Disinfectant. Filed by William R. Warner & Co., New York, Nov. 23, 1944. Serial No. 476,829. Published May 29, 1945. Class 6.

415,657. Degreasing compound. Filed by Formax Mfg. Co., Detroit, Dec. 26, 1944. Serial No. 477,939. Published May 29, 1945. Class 4.

415,659. Laundry detergent. Filed by Diamond Alkali Co., Pittsburgh, Dec. 29, 1944. Serial No. 478,038. Published May 29, 1945. Class 4.

415,673. Liquid cleaning compound for degreasing engine parts. Filed by E. A. Gerlach Co., Philadelphia, Jan. 29, 1945. Serial No. 479,118. Published May 29, 1945. Class 4.

415,688. Powdered wax for dance floors. Filed by C-Z Chemical Co., Beloit, Wis., Feb. 14, 1945. Serial No. 479,769. Published May 15, 1945. Class 16.

415,689. Soap. Filed by Ray E. Hulbert, Rockaway, N. J., Feb. 14, 1945. Serial No. 479,798. Published May 29, 1945. Class 4.

415,845. Chemical preparation for softening and cleaning brakes and transmission linings and clutch facings. Filed by 20th Century Chemical Co., Camden, N. J., June 7, 1940. Serial No. 432,798. Published Nov. 25, 1941. Class 4.

415,851. Medicated powder to be used for the treatment of athlete's foot. Filed by the Mennen Co., Newark, N. J., Sept. 14, 1943. Serial No. 463,400. Published June 12, 1945. Class 6.

415,867. Stabilizer and emulsifying agent for tooth paste and powders, etc. Filed by Stein, Hall & Co., New York, June 17, 1944. Serial No. 471,366. Published Sept. 12, 1944. Class 6.

415,868. Compound for removing grease and oil from metal surfaces. Filed by Amalgamated Chemical Corp., Philadelphia, June 22, 1944. Serial No. 471,506. Published Oct. 17, 1944. Class 4.

415,871. Floor wax. Filed by Columbia-Bedford Corp., New York, July 3, 1944. Serial No. 471,897. Published June 5, 1945. Class 16.

415,888. Preparation for cleaning and polishing floors, furniture and woodwork. Filed by Vita-Var Corp., Newark, N. J., Sept. 23, 1944. Serial No. 474,562. Published June 5, 1945. Class 16.

415,896. Preparation for germicidal, fungicidal, antiseptic, bactericidal, disinfectant, and parasiticidal purposes. Filed by Lehn & Fink Products Corp., Bloomfield, N. J., Nov. 10, 1944. Serial No. 476,333. Published June 12, 1945. Class 6.

415,899. Chemical preparation for use in laundering textile fabrics. Filed by Hands Bros., New York, Nov. 14, 1944. Serial No. 476,435. Published June 12, 1945. Class 6.

415,947. Toilet soap. Filed by Iowa Soap Co., Burlington, Ia., Feb. 8, 1945. Serial No. 479,569. Published June 12, 1945. Class 4.

415,954. Toilet soaps. Filed by Lynette Perfumes, Inc., New York, Feb. 21, 1945. Serial No. 480,076. Published June 21, 1945. Class 4.

415,964. Liquid soap. Filed by International Chemical Co., Chicago, Feb. 26, 1945. Serial No. 480,237. Published June 12, 1945. Class 4.

415,965. Toilet bowl cleaner and deodorizer. Filed by International Chemical Co., Chicago, Feb. 26 ,1945. Serial No. 480,238. Published June 12, 1945. Class 4.

415,966. Liquid soap. Filed by International Chemical Co., Chicago, Feb. 26, 1945. Serial No. 480,241. Published June 12, 1945. Class 4.

415,967. Self-polishing floor wax. Filed by International Chemical Co., Chicago, Feb. 26, 1945. Serial No. 480,242. Published June 12, 1945. Class 16.

415,968. Self-polishing floor wax. Filed by International Chemical Co., Chicago, Feb. 26, 1945. Serial No. 480,243. Published June 12, 1945. Class 6.

415,977. Chemical preparation for use to remove carbon and soot deposits in furnaces and fire boxes. Filed

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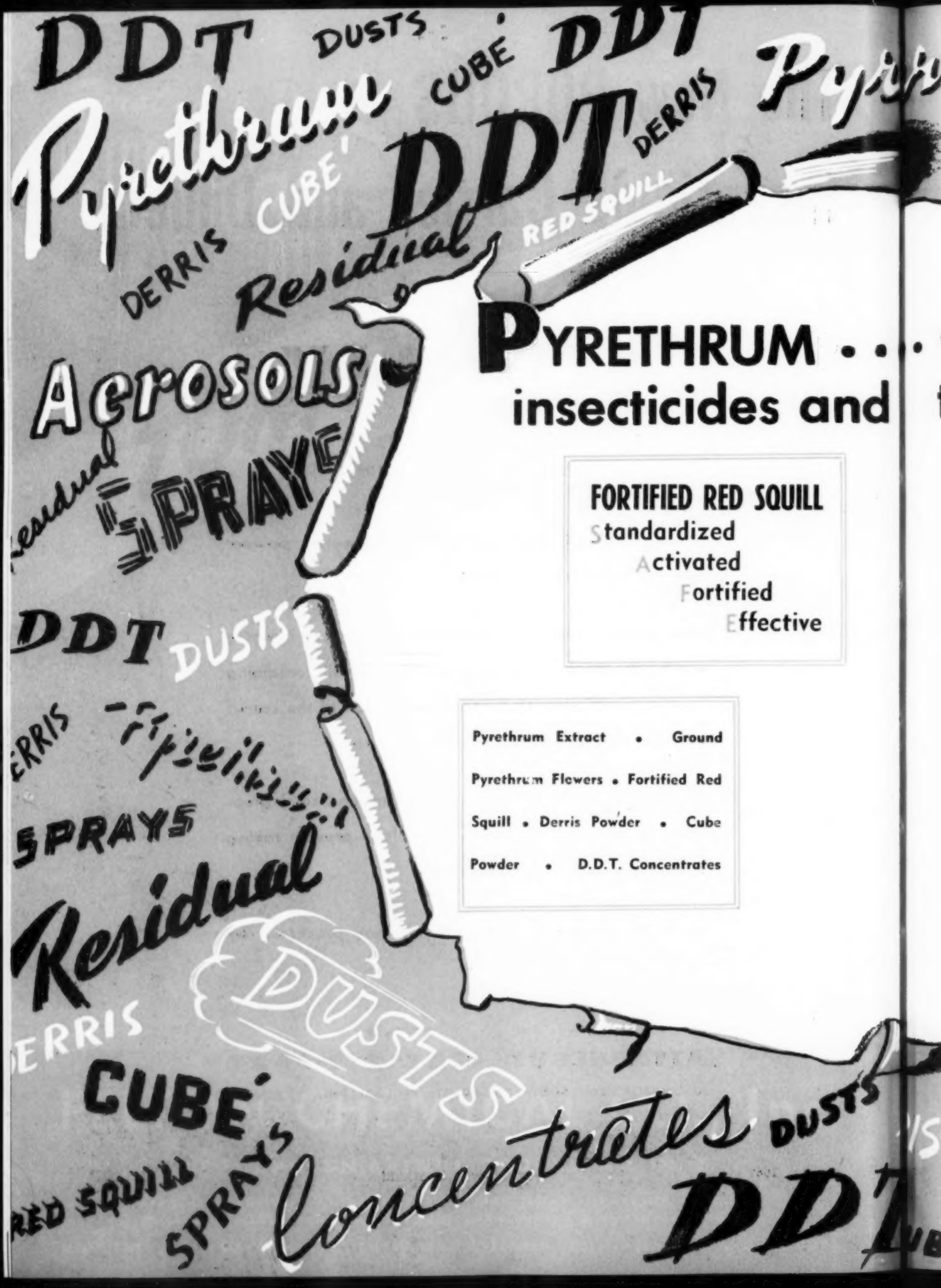

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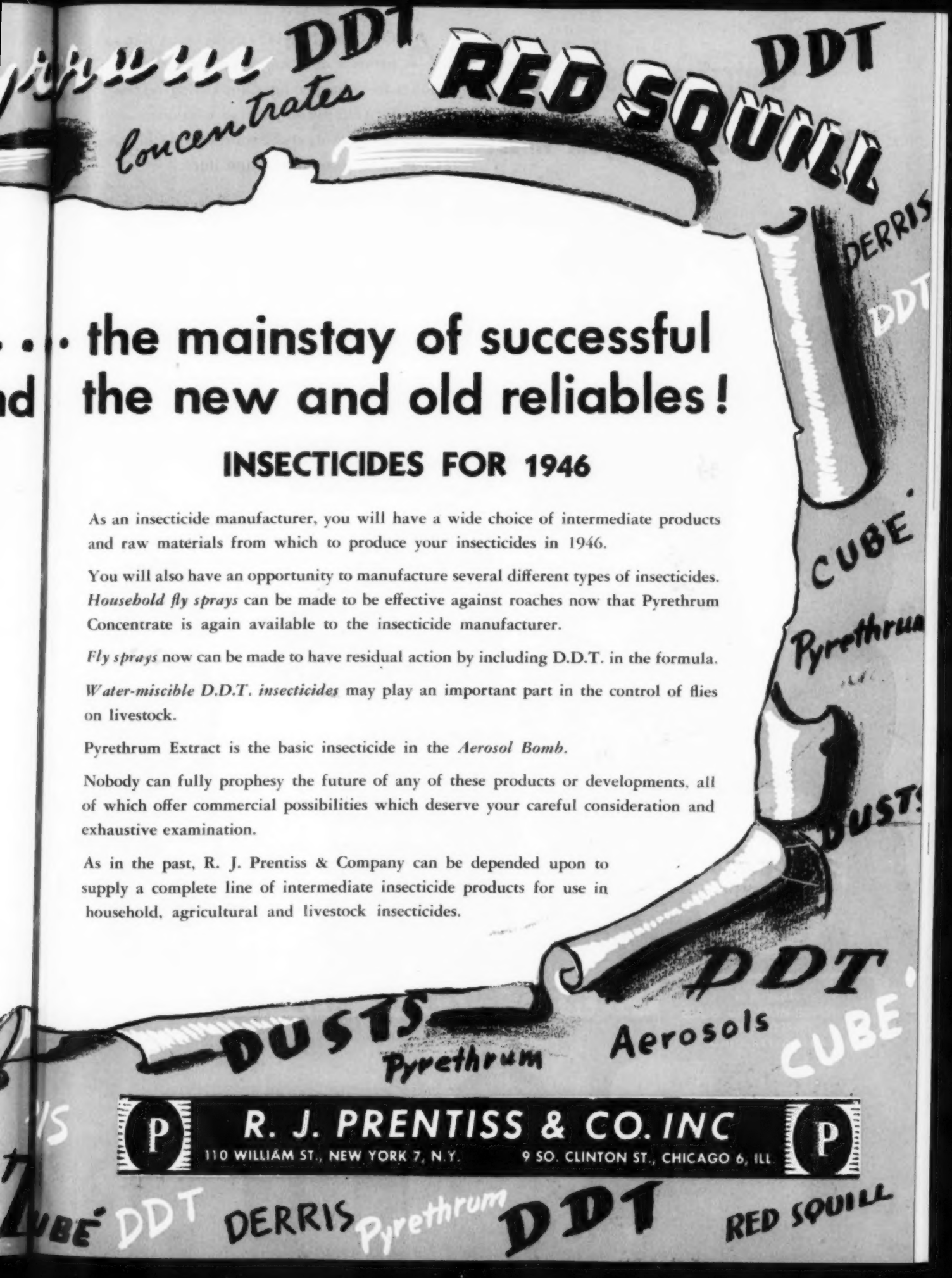

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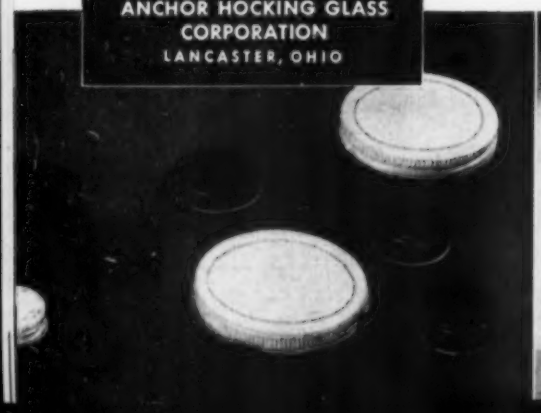

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INSIDE NEWS

OCTOBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1945

Canned Protective Coatings Save Millions Yearly

With the annual loss of steel due to corrosion estimated at $964,000,000, the protection of metal surfaces cannot be over-emphasized.

To forestall attacks, steel must be completely sealed against all the agencies that seek to destroy it. These principal corrosive agencies are air, moisture, gaseous vapors, soil acids and alkalies, electrolysis, and the action of both fresh and salt water. To prevent destruction from any of these causes, appropriate protective coatings were developed by an Indiana corporation to give maximum protection under all conditions of climate and service.

Upon the efficiency of such protective coatings, the service life and maintenance cost of oil, gas and gasoline lines depend. These lines frequently traverse many different types of soil — going over mountains, under rivers, through forests and swamps. They are subjected to extremes of temperature varying from sub zero to tropical. So the coating must not only be capable of protecting the steel from corrosive agencies, but also must be hard enough to provide satisfactory protection against abrasion.

Then, too, the bond between the coating and the steel must be so strong that there will be no slippage of the coating due to soil stress or other external influence. Enamel is a coating that fulfills all of these requirements and meets the most exacting specifications for protecting oil, gas and gasoline pipe lines.

Where the greatest degree of protection is desired, and conditions permit its application, enamel is recommended. After cleaning thoroughly, the surface to be protected should, when dry, receive an application of cold tar priming solution which serves as a bonding medium. This should be followed by the hot application of a substantial coat of tough enamel produced from coal tar.

The use of primer and enamel in this procedure provides a coating that is impervious to any corrosive agent, a coating so intimately bonded to the steel that it prevents all corrosive agencies from coming in contact with the metal. The coating can be so regulated in its properties that it will withstand temperatures as low as minus 20° F. without flowing or sagging.

For special protective requirements in which certain special conditions exist, other protective coating materials have found wide and successful use.

Among these are cold application paints for storage tanks, structural steel, stacks, towers, metal buildings and other metal constructions —for use on surfaces above or below ground, on or under water. Another protective coating, available in colors, is especially adaptable for pipe protection in sewage disposal plants and water works and is also for use on other metal and concrete surfaces. For painting creosoted wood surfaces such as wood block floors, poles, guard rails and posts, a paint known as creocote is extensively used, while transote, a colorless, odorless and paintable wood preservative is specially prepared for protecting wood against insect attack and decay. There is also an aluminum paint for protecting and improving the appearance of storage tanks, metal buildings, towers, stacks, gutters, radiators, truck and trailer bodies, tractors, and other farm equipment. This aluminum coating deflects the rays of the sun, resulting in substantial heat reduction, not only on the surface but on the inside of tanks or buildings.

Thus the use of paints and other protective coatings saves surfaces of buildings, equipment and materials from destruction that would otherwise run into millions of dollars annually.

The consumer can always be *sure* of the paints and coatings he's going to handle. One reason: They come packaged in tin cans. Products packaged in cans are not affected by sunlight, are protected against air, moisture, breakage and chipping. They are easily handled, stocked and disposed of. When better products are packaged they're packaged in tin cans for *best* protection. 1093

New Bath Saves Citrus Skins

Control of decay of citrus fruits by a method recently discovered had a drawback. The chemical used, sodium ortho-phenylphenate, stopped the decay well enough, but it injured the rinds of the fruit and there was a chance the industry would not gain anything from the discovery. Then, scientists found they could correct the fault by adding formaldehyde to the bath.

The mixture (made up of 37 percent standard formaldehyde and 63 percent of sodium ortho-phenyl-phenate) was applied to the fruits in a warm flood spray or bath.

Tests and retests under actual operating conditions in citrus packing plants convinced the experimenters that the mixture was satisfactory in greatly reducing decay loss and leaving clean attractive skins carrying such extremely small quantities of the mixture that no special washing was necessary. Seeing the economic advantage of this relatively cheap treatment in preventing loss and providing sounder fruit for the consumer, several packers are using it this season. 1094

Repellent Coatings Don't Stick

It is said that repellent coatings have been developed to prevent the backing of adhesive to stick when rolled. 1095

Tough Floor-Resurfacing Material

An asphaltic-base liquid floor resurfacing material has been developed which, when added to a concrete mixture, will bond to concrete, wood or other floor materials. The material is said to be fire-resistant, insulating and vermin- and termite-proof. It can be used either for patching or to provide a complete new surface. It will stand traffic two days after being laid. 1096

Gets the Gallinipper

An ingenious and simple poisoning device that works automatically against certain types of vexatious mosquitoes does so by withholding a deadly dose of DDT until it is needed and then delivers it at the time it will be most effective against newly hatched wigglers. Research efforts have been rushed for protection of the armed forces against insect pests and insect-carried diseases.

The device takes advantage of the fact, established by scientific studies of the life habits of the insects, that mosquitoes of the *Psorophora* group have the habit of laying their eggs in grassy areas that are likely later to be flooded by heavy rains or rising streams and ponds. The eggs mature, and as soon as the land is covered by water, they are ready to hatch almost instantly and soon develop into biting adults. One species is known as the shaggy legged gallinipper; another is the Florida glade mosquito.

Hatching in enormous numbers, these biters may be a terrible pest to troops, farmers, and others working outdoors. Entomologists can inspect an area, locate the egg-infested soil, and predict that trouble will follow. But treating broad areas in the short time between flooding and the biting period has been difficult. The new development permits making preparations in advance of hatching.

The new device is a bottle containing a small quantity of DDT in oil. The bottle is partly buried in the soil in an area where hatching is likely. The bottle has an opening just above ground level. As soon as flood water rises to this opening the oil floats out and spreads a thin, deadly film to kill new hatched wigglers when they come to the surface.

DDT, however, is toxic to fish and other forms of aquatic life. The conditions under which the new device may be used still remain to be worked out. Tests are expected to be made on the device in salt marshes and areas subject to flooding against other species of mosquitoes having egg-laying habits similar to those of the *Psorophora* group. 1097

NATIONAL CAN

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Scientists Develop New Insect Repellents

Development by entomologists of the USDA of new insect repellents, effective against mosquitoes and chiggers, and to a lesser extent against wood ticks, may now be revealed. These repellents, which include dimethyl phthalate, have been used extensively by the allied armies since 1942.

In May 1942 when dimethyl phthalate was tested as a repellent against mosquitoes, it was found to be more effective for preventing bites of the malaria mosquito, than any other compound known at that time. Immediately after it was found to be safe for use on the skin of man, it was made availabe to the armed forces, where it was urgently needed. The information developed served as the basis for such early use of dimethyl phthalate as it was already in production for civilian use for other purposes and could be manufactured with existing equipment. Later, an improved mosquito repellent using dimethyl phthalate as one of the ingredients was developed. It was found that this mixture was more effective for a variety of mosquitoes and biting flies than the pure dimethyl phthalate. This development has enabled the armed forces to issue a single repellent for the protection of personnel against a variety of insects.

In 1942, research workers tested many materials against mites known as "chiggers." It was found that dimethyl phthalate, as a liquid insect repellent, when properly applied to clothing assured that the person using it would be safe from mite or chigger attack. This repellent is applied lightly to the inside of the cuff of trousers and sleeves as well as the buttoned surfaces of the shirt. This barrier prevents chiggers from crossing it and attaching to the skin of man. It kills the ones that are not repelled by it. Dimethyl phthalate has been used extensively and with great success against chiggers by allied military forces in the Pacific theaters. 1098

Still Cloudy

New light is thrown on the problem of clouding in apple juice, but no conclusions are reached by the investigators after a study of at least 60 different packs of apple juice. An anaerobic growth may be, at least in part, responsible. Previous theories have held that clouding was due to pectin.

As for acidity, juices from apples with defects and from small sized fruits had a higher acidity, as was to be expected, but juice from red apples had a higher pH and higher acidity than comparable juice from apples of less red color. Conditions of picking and storing of the fruit, types of defects, and many other conditions affect the resultant juice. 1099

Technical Topics

PATTERNS ON PLYWOOD – Plywood, sensitized by spraying a liquid photo emulsion on it, can receive a photo impression for patterns. This helps effect a great saving in construction time. A prominent aircraft manufacturer is now using this sensitized plywood for cutting templates. 1100

NEW COSMETIC PRODUCTS—Another new product in the making is a synthetic rubber powder puff, claimed to be superior to the present puff. Lipsticks and leg makeup applicators using the foamed latex of synthetic rubber are also proposed. 1101

FISH NETS TO LAST LONGER – The development of a resinous treatment for fish nets at a southern laboratory promises a substantial increase in the life of fish nets when materials are made available. 1102

NEW COMPOUND—A bacteriostatic and fugistatic organo-mercuric compound has been patented for use on paper, textiles and leather. 1103

SEAWEED IN CHEMICAL INDUSTRY, TOO—An extensive, growing industry built around seaweed has developed in the last few years. In addition to textiles similar to rayon, paper like cellophane, and building boards, it is used in products such as food, candy and drugs. An increasing chemical industry is developing with seaweed as the base material. 1104

EXPLODING INSECTICIDE DUST—Explosives for applying insecticide dust have been used in England using a mortar of rolled, cemented paper, enclosing the dust in a paper lining and a powder charge. Parks, forests and orchards can be dusted at moderate cost compared with present methods. 1105

PRODUCES QUININE – Quinine is derived from the bark of *Remigia pedunculata* by heating with diluted sulphuric acid and precipitating with sodium hydroxide. Cupreine is also isolated as a sulphate and methylated to produce quinine. 1106

PHENOTHIAZINE CONTROLS POTATO MOTHS—It is reported that phenothiazine gave the best control of potato moths in Australian tests. The next most effective agents were (1) synthetic cryolite and (2) lead arsenate with sodium-aluminum sulphate. 1107

ORGANIC SOLVENTS—It is announced that organic solvents can have inhibitory influences on bactericides. Acetone, alcohol, diacetone alcohol and glycerin diminish the phenol coefficients of paracresol and thymol. Acetone and diacetone alcohol considerably increase the bactericidal action of phenol, increase that of paracresol slightly, do not affect thymol. 1108

VITAMIN K—A patent has been issued on a process for obtaining vitamin K derivatives having anti-hemorrhagic activity equal to that of the original vitamin. 1109

POWDERS CONTAINING ROTENONE—Activation, oxidation and subsequent degradation of powders containing rotenone are reported greatly accelerated by the addition of minor amounts of inert nonvolatile liquid. Oxidation is greatly decelerated by small amounts of oxalic, phosphoric, sulphamic, or other strong acids. 1110

REDUCES MOUTH-SPRAY INFECTION—It has been discovered that propyleneglycol, vaporized at the rate of 0.5 ml./10^6 ml./hr. by a field apparatus, produced and maintained a 90 percent reduction in mouth-spray infection following simulated sneezing in an unventilated room of 1700 cubic feet capacity. 1111

RETAINS NATURAL ASCORBIC ACID—A process has been discovered for retaining natural ascorbic acid of fruit in citric acid made from citrus fruits. 1112

NEW HYDROSOL—A new hydrosol from Irish moss has been found that combines readily with liquids as a wetting agent, emulsifier, binder or penetrator and which may be used in printing and lithographing inks to increase coverage. 1113

SKIN PREPARATIONS BASES ANALYZED—Analysis of bases for preparations tending to nourish and improve skin health has been announced. 1114

SOAP FOR OIL PRODUCTION—A process using soap in treating oil wells for increased productivity of subterranean oil-bearing strata is announced. 1115

INDUSTRIAL ALCOHOL PROCESS—A continuous-flow process for the production of industrial alcohol is reported. 1116

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

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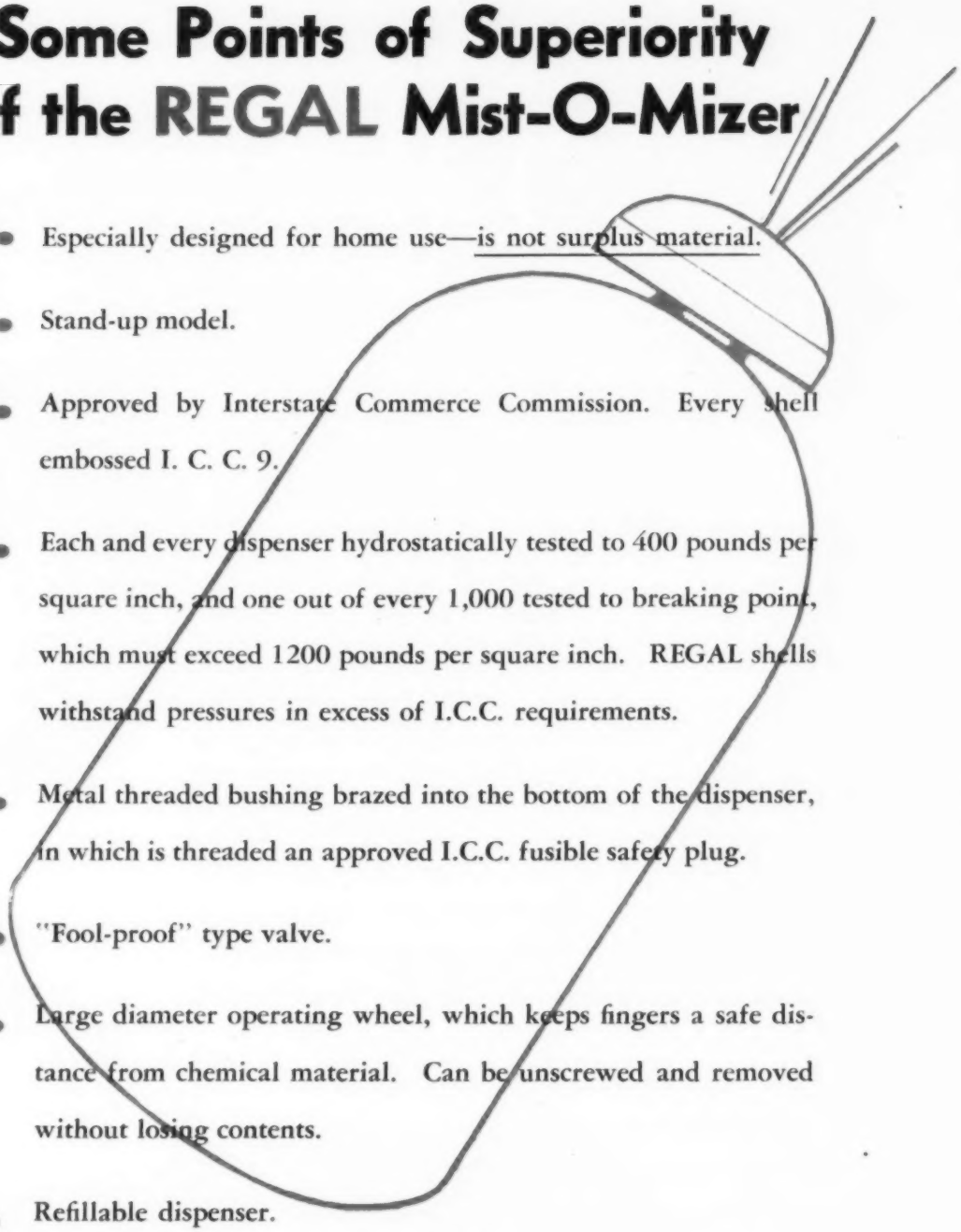

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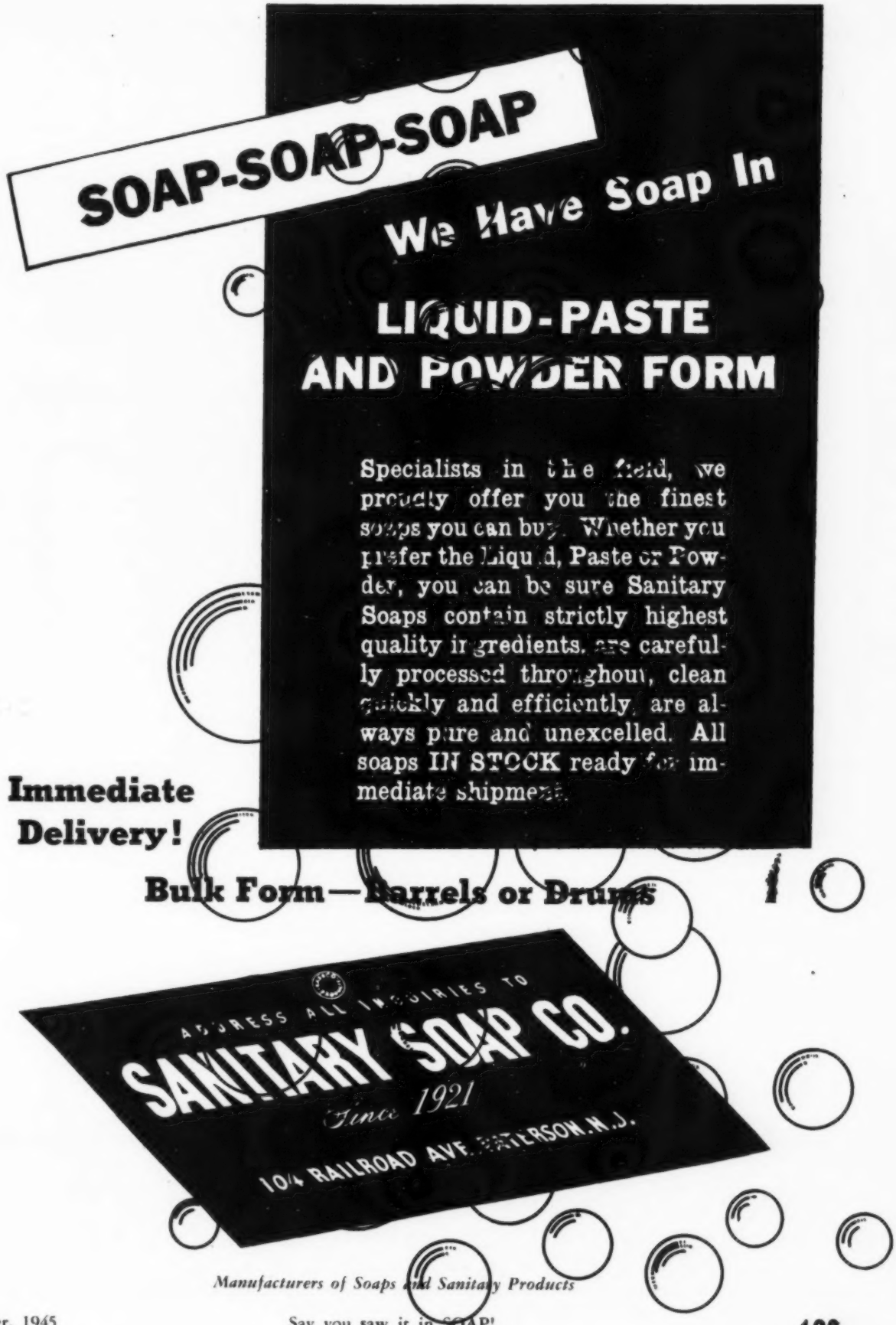
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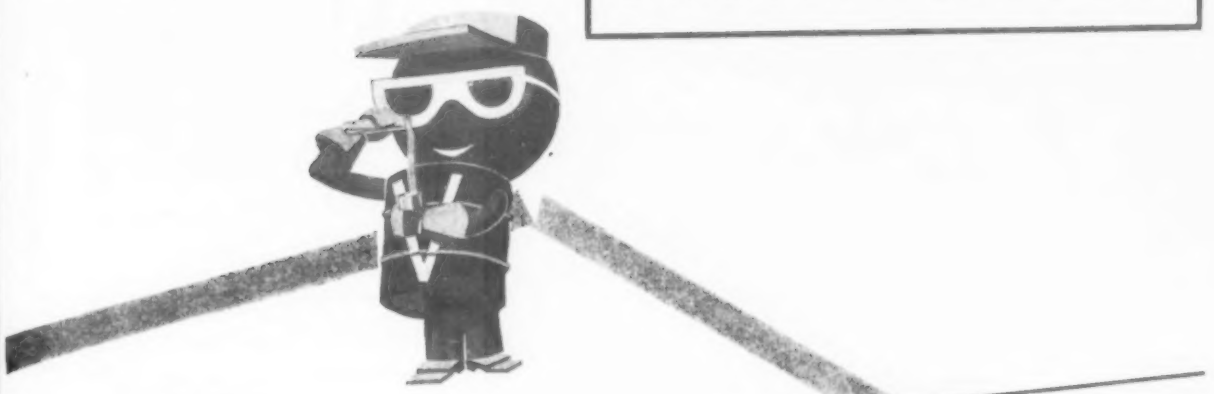

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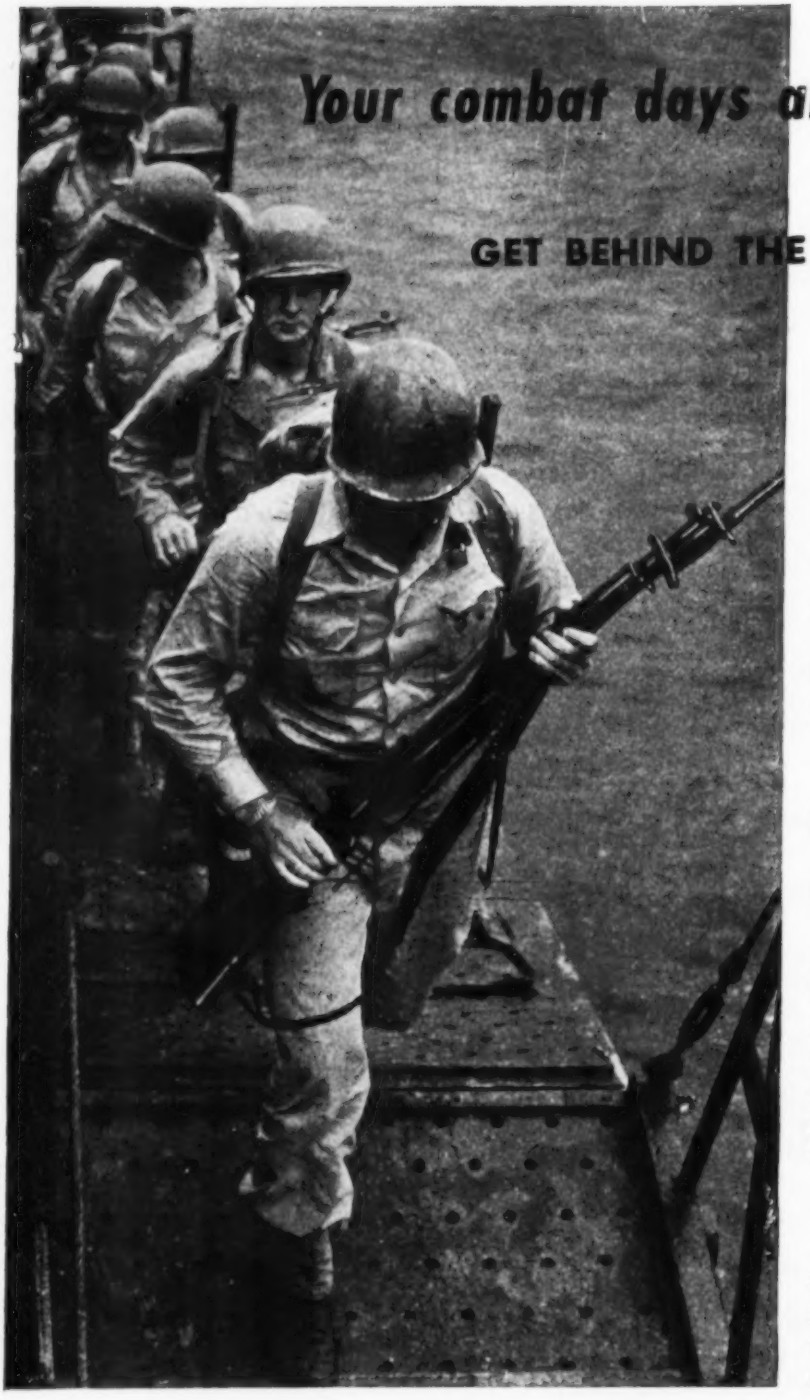

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The Behavior, Life History and Control
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By ARNOLD MALLIS

THIS new book is a thoroughly practical, complete and up-to-date study of pest control which will be invaluable to every insecticide manufacturer, pest control operator and entomologist. Approximately 570 pages in length, and containing 140 illustrations, it deals in a practical way with the behavior, life history and control of household pests.

While there have been other books in this field, Mr. Mallis' book is by far the most complete and up-to-the-minute practical text on the subject. It reflects insecticide developments as recent as those of the past few months, carrying for instance, the most recent findings on DDT, aerosol insecticides, insect repellents, etc. The emphasis throughout is on control measures, and the author covers fully all the commonly used insecticide materials and treatments. Fumigation is the subject of a special chapter.

An unusually complete list of references to the literature on household pests, insecticides and their use adds considerably to the value of Mr. Mallis' new book. Hundreds of references to the technical literature are listed.

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8	Dry Rot Fungi	17	Spider or Ptinid Beetles	26	Household Fumigation
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SANITARY PRODUCTS

A SECTION OF SOAP

Official Publication National Association of Insecticide & Disinfectant Manufacturers

THE barrage of misinformation regarding DDT continues to descend upon a confused public. For the second consecutive month, the U. S. Public Health Service has been conspicuous as an offender because of the character of its DDT "news" releases. In warning the public against the purchase of any DDT insecticide containing less than five per cent DDT, the U.S.P.H.S. once more parades its ignorance and again proves that it is no better qualified to advise the public on insecticide composition than the man in the moon.

That the U. S. Public Health Service has ignored entomological data in its "warning" to the public against being gypped has led to serious and unjustified embarrassment for any number of reputable insecticide manufacturers. Based on comments in the industry, the Public Health Service before the smoke clears away may wish that it had never injected itself into this phase of the DDT picture where obviously it does not belong.

For the enlightenment of the Public Health Service and others who are taking upon themselves the duty of advising the public on DDT, there are many DDT entomological data yet to be evaluated. Some bring forth entirely new ideas on DDT compositions. Low concentrations of DDT, even down to a quarter or less of one per cent, in conjunction with other insecticidal ingredients have proved useful in contact sprays. A fraction of a per cent of DDT will boost the kill of a B grade or sub-standard spray to a grade AA product. Three per cent solutions have been reported effective painted on screens against house flies. One per cent solutions have been found to kill bedbugs and fleas. A pyrethrum insect spray which gave less than fifty per cent kill against roaches by the new tentative USDA method showed an increase to above seventy-five per cent kill after the addition of one-half of one per cent DDT. And all of this information and more comes from entomologists right now actively engaged in research with DDT compositions. And it stems not from a desire for publicity at any cost, but from a desire to unearth the true facts.

Granted that many fly-by-nights have rushed DDT products on the market, but likewise numerous reputable manufacturers are now marketing DDT insecticides or have added DDT to their previous formulations. The future stake in DDT as an insecticide lies with the insecticide industry. If that future is to be protected, the flood of confusing DDT publicity from every Tom, Dick and Harry has got to be stopped and stopped soon, and its already harmful effects counteracted by the dissemination of sound information by those whose interest in DDT goes further than using it as a publicity hatrack.

Refreshing by contrast is the newspaper statement from W. G. Reed, Chief of the Insecticide Division, USDA, on October 5 correcting the "five per cent DDT fallacy" promulgated by the Public Health Service and giving a clear cut resume of the facts about DDT to the public. Inasmuch as the Insecticide Division enforces the Federal insecticide law, its chief is qualified to speak with authority on the subject which he does clearly and concisely in outlining DDT composition and uses. Had the USPHS not injected itself into the DDT situation, but had left the matter with the USDA where it belongs, much public misinformation and confusion could have been avoided.

Aerosol Insecticides

PARALLELING the tremendous wave of interest which the trade has shown in DDT since government restrictions were removed a few weeks ago, has come a comparable though perhaps less widespread demand for more information on civilian market possibilities for aerosol insecticides, another important wartime insecticide development. A number of very substantial factors are in various stages of progress with a number of interesting consumer aerosol packages, and while there seems to be little prospect of wide developments in the field this season, since the northern fly and mosquito season is about over, indications are that by next spring there will be a number of tested products on the market. With DDT, there has been a rush to market, and many of those who have rushed fastest have been firms who seem to know little or nothing about the product—or even about insecticides of any type. With aerosols, the interested firms seem in general to be well established companies who want to complete their test work, and to iron out all of the kinks in their products, before going to market.

The first aerosol products to reach the test marketing stage resemble, as they might be expected to do, the aerosol bombs used by the army and navy. They make use of DDT and highly concentrated pyrethrum extract as the toxicants, continue to employ "Freon" as the dispersing gas, but have generally eliminated oil of sesame from their formulas. The container or dispenser is a close replica of the "bombs" supplied to the Army and Navy. The new civilian aerosol bombs are priced anywhere from $2.00 to $4.00,—the latter top level just having been fixed by the OPA as a price ceiling.

As to specific formulation—one new product contains about 3 per cent of a 20 per cent solution of pyrethrins, 2 per cent DDT, sufficient solvent to dissolve the toxic ingredients, and the balance is "Freon." For a time at least, it is doubtful if the DDT content will be boosted any higher than 3 per cent. The United States Public Health Service has sanctioned the use of 3 per cent DDT in connection with the Army and Navy formulas for aerosol insecticides, and those adhering to this maximum in their formulations would seem to be on fairly safe ground in defending against any possible damage suits, as they would be able to defend their position on the basis of government tests and usage of 3 per cent DDT by the Armed Forces. The pyrethrum content will be determined by price factors, as this is the highest cost item entering into the formula. The maximum effect is obtained, it is reported, by using 4 per cent of a 20 per cent pyrethrin concentrate, but price factors will reduce this content down to 3 or even 2 per cent in different products.

The possibility of reducing the cost of the pyrethrum part of the formula is held out by Dodge & Olcott, Inc., New York, who are marketing a combination concentrate containing piperonyl cyclohexenone. Pyrethrum consumption is reduced by sixty per cent and cost by approximately fifty per cent, it is said, with no loss in efficiency of the aerosol. The combination concentrate is reported to have been used successfully by the Bureau of Entomology to replace straight pyrethrum concentrate on a pound-for-pound basis.

John Powell & Co., New York, are also reported to be working on special formulations for use in aerosol bombs which they say will reduce the cost of the insecticidal ingredients to about half the price of the Army formula.

The dilution of "Freon" with methyl chloride as a move to reduce propellant cost does not seem to be attracting much interest at the moment, as the costs of the two gases are not far enough apart to justify the rather complex mixing operation. However, several companies are reported working on new propellants which may be ready for announcement shortly, and which it is believed will be of definite interest to aerosol manufacturers.

The search in propellants seems to be in the direction of gases which will be cheaper than "Freon" and which will develop lower vapor pressures. One gas which develops a gauge pressure as low as 30 lbs. per square inch at a temperature of 70° F. is said to be under investigation. However, it is reported to have the disadvantage of being mildly flammable, and it is doubtful if the Bureau of Explosives will be inclined to permit shipment of flammable propellants in other than the types of containers specifically prescribed for them.

Westinghouse Electric & Manufacturing Company who made so many millions of aerosol bombs for use by the Armed Forces, is perhaps as well along with plans for developing the civilian market as anyone else in the field. It is reported that they will run a market survey in Jacksonville, Fla., next month and will sell 10,000 of their 1-pound containers in that market at $3.00 each. The survey will attempt to evaluate market possibilities, determine consumer response, and to iron out any possible kinks in the product as adapted for civilian use. Westinghouse is also reported to be

supplying 5,000 of these containers to Gulf Oil Company for a similar test campaign in another southern city to be selected by Gulf.

Regal Chemical Corporation, of Brooklyn, one of the first organizations to start working with aerosol insecticides, is also reported to be well along with plans for tapping the civilian aerosol market. They are now ready to supply in commercial quantities an aerosol dispenser closely resembling the pint size used by the Army and Navy, which will be marketed at an initial cost to the user of $3.98. Their program includes arrangements for collecting and refilling the exhausted containers, the first such program to be announced. When the dispenser is empty, the user will return it to this supplier and receive a refilled container for approximately $2.25.

Another firm that seems to be fairly well along with its plans for civilian marketing of aerosols is Knapp-Monarch Company of St. Louis. Their 1-pound container, it is reported, will sell at $2.95 and preparations are being made to put over one million of them on the market over the next few months. Bridgeport Brass Co., Bridgeport, Conn., who were among the original suppliers of aerosol bombs to the Armed Forces are also reported to be fairly well along with plans for civilian sale. Trade reports are to the effect that there will be a tie-up on sales with Sherwin-Williams Co., similar to the Westinghouse-Gulf Oil arrangement.

Bridgeport recently supplied a substantial number of bombs to Gimbel Bros., New York, which went on sale early in September in what was probably the first major test of civilian interest. Sales people indicated to our reporter that customers mobbed the aerosol counters and bought up the bombs by the thousands as fast as they were put on sale at $3.98 each. Macy also offered an aerosol bomb at $2.60.

Stanco, Inc., New York, functioned as a sub-contractor on aerosol contracts for the Armed Forces, but to date have announced no plans for the civilian market other than the bare fact that they will have an aerosol insecticide of some kind for sale next season. McCormick & Co., Baltimore, report that they are going ahead with plans for aerosols for the civilian market and that perhaps by December or January they will have products to announce. They do not know as yet whether more than one size container will be offered, or whether more than one formula will be employed. Pennsylvania Engineering Co., Philadelphia, reports that it is now manufacturing and selling aerosol insecticides for civilian use. The container is of the refillable type. Armstrong Engineering Co., New York, is another firm reported to be developing plans for the civilian market, but no details are as yet available. Reports are also heard that Industrial Management Co., Valparaiso, Ind., is working on a new aerosol dispenser.

PRACTICALLY every company interested in this field seems to be very close-mouthed as to its plans, and no publicity is wanted. In many cases their plans are not yet definite, and they hesitate to make any tentative announcement that might later have to be changed. The sudden end to the war apparently caught the insecticide industry unprepared, at least on aerosols, and many firms are simply not able as yet to say with assurance what their plans may be. Others are in the position, perhaps, of working on types of containers which they do not want their competitors to find out about, at least until they are past the test stage and ready to go on the market.

One of the most interesting new developments in the aerosol field is the product which General Foods Corporation of New York is reported to be testing. Their aerosol comes in the form of a small 1/5 pound cylindrical cartridge, which will be dispensed from a novel patented dispenser. The dispenser, also cylindrical and about two inches in height, has a piercing pin in the bottom which penetrates the aerosol cartridge, releasing the insecticide within the dispenser, when the top of the dispenser is screwed shut. A lever on the side of the dispenser then serves for release of the spray through a valve. Reports say that three of the refills will sell at a price in the neighborhood of $1.00, but up to the present, no decision has been reached on a selling price for the dispenser. Whether the company will try to make a profit on the dispenser or whether, like the razor manufacturers, they will put the dispensers out at a minimum figure and take their profits from the refills, seems to be undecided as yet.

It is reported that 500 of these units are being put in the hands of housewives in eleven cities in a test campaign to determine consumer reaction. It is emphasized that the product is still very definitely in the testing stage, and there is no assurance that the company will market this particular product—or for that matter any aerosol product.

Another attempt to tap the market for aerosols in the low price brackets is being made by the Airosol, Inc., successors of Midwest Engineering & Tool Co., Neodesha, Kansas. They are reported to have developed a small and inexpensive container which can be thrown away after use. A representative of the company has recently been in the east with the idea of interesting large merchandisers in purchasing and distributing containers of this type. The tentative price range of this particular product would seem to make it a definite possibility for reasonably wide distribution among the lower income groups.

MAKERS of the "one-shot" sparklet type aerosol dispensers, of which the Army bought considerable quantities, do not seem to be as well along in the reconversion to civilian marketing. Government contracts held by the Sparklet Devices Division of Knapp-Monarch Co., Newark, N. J., have just recently been terminated, and the company reports that it is not ready as yet with an adaptation of the product for civilian use. The insecticide sparklets provided the Armed Forces, it is admitted, would be too costly for the civilian market. However, the company is hoping to develop a new product along this line which might sell at a lower

figure and perhaps have a wider field of utility. It seems to be generally admitted that the one-shot aerosol could not achieve any very substantial sale at a consumer price of above twenty cents. A wider field of use, such as perhaps in moth-proofing, would definitely give the product a stronger consumer appeal. Kidde Mfg. Co., Bloomfield, N. J., another manufacturer of sparklet-type aerosols, is in much the same position, having no definite plans yet for conversion of its wartime aerosol production for the civilian market.

A number of companies are reported trying to develop containers which will be able to make efficient use of carbon dioxide as the propellant. This gas has the advantage of being cheap, readily available and non-toxic. However, it develops substantial pressure and its adaptation for use in insecticidal aerosols has not been easy. Manufacturing Tool & Supply Corp. of Burlington, Vt., are using carbon dioxide in a sparklet type aerosol, and are also reported to be experimenting with larger sizes as well. In their dispenser a pellet of CO_2 is inserted in the bottom of the container and a metal cap welded over it. When the metal cap is punctured by the user this releases the gas and makes the dispenser ready for use.

Another interesting adaptation of the aerosol principle is reported being worked on by Virginia Smelting & Refining Co., Norfolk, Va. They have in mind marketing fixed dispensing installations, for application in warehouses, barns, etc., which would spray a measured quantity of insecticidal aerosol at pre-determined intervals. The obvious advantage of the aerosol would of course be the elimination of residue on the sprayed products.

MUCH speculation is noted as to the potential volume of aerosol sales. In the final analysis, this will probably depend to a great extent on the price at which an effective product can be sold. At four dollars,—or even at two dollars—aersols can tap only a small segment of the insecticide consuming market. There are always a small number of potential buyers in any market for a novel gadget such as the aerosol bomb, regardless of price, but to sell over a period of years, and in competition with oil base insecticides and the conventional type sprayers, it seems quite apparent that aerosols will have to come down to a lower price level.

Opinion in the trade indicates that the present cost of production of a one pint aerosol bomb of the type used by the Army and Navy is in the neighborhood of $1.25 to $1.40. Perhaps production economies, use of a lower percentage of active ingredients, lower cost toxics, perhaps substitution of a cheaper gas for "Freon," may in the next year or two push this figure below a dollar, but even if this result is achieved, it is difficult to envision a low enough price to get many bombs of this type into the hands of the lower income brackets of the population,—who incidentally are the largest buyers of insecticides as market studies indicate.

The answer may possibly be found, some students of the market feel, in a lighter weight, low-pressure aerosol container resembling the reinforced tin can used for export shipment of beer. Equipped with a dispensing valve, such a dispenser might serve as a low cost dispenser for aerosol insecticides. When filled, it might well sell at around forty to fifty cents. Before such a container becomes a practical possibility, however, it will be necessary that the Interstate Commerce modify its present shipping regulations. A can of this type holding over 4 ozs. must now be built to stand a pressure of 25 lbs. per sq. in. at a temperature of 70° F. New propellants such as those being developed by General Chemical Company for aerosol use may help solve the problem, and if the ICC can be persuaded to agree to some modification of its present regulations, at least one of the large can companies feels that the problem of a low-cost container for aerosol insecticides can be solved.

The latest report on the container shipping specifications follows a meeting held at the Bureau of Explosives of the Interstate Commerce Commission in New York, September 12. At this meeting it was suggested by one aerosol manufacturer that containers of the types which met Army specifications be permitted to be used as "one trippers" by the ICC. The Bureau of Explosives seemed in general agreement with this idea, at least as a temporary measure, but another aerosol manufacturer who is complying with ICC-9 Specification in the design of its own dispenser, expressed strong opposition to the granting of permission to its competitors to use a lighter weight container. The situation is still confused. The Aerosol Committee of the Compressed Gas Manufacturers' Association was reported to have a meeting scheduled for September 25 and 26 at which, at the request of the Bureau of Explosives, it was proposed to establish a specification for non-refillable containers.

ASIDE from the element of cost, the problem of "drip" is also common in some types of aerosols and dispensers. One of the reasons why oil base insecticides were never able to tap their maximum market has been the drawback of dripping and squirting sprayers which wet drapes, shades, upholstery, rugs and floors, and left the hands covered with oil. While the aerosol dispensers seem to have eliminated the staining hazard through their minute diffusion of the insecticide, the "drip" problem still remains, at least with some of the devices now being offered. The necessity of a solvent for the toxic ingredients introduces the liquid element into the formula, and the necessarily cheap valves do not completely prevent escape of sufficient liquid to wet the hands and coat the exterior of the dispenser with oil.

Associated with this problem of drip is the design of the spray nozzle and its location on the dispenser. Most of the dispensers that have come on the market up to this point have the nozzle at the top and thus can only spray upward. However, one or two of the newer developments feature a spray aperture at the side, making it possible to spray downward.

(*Turn to Page* 163)

A.I.F.A. Meets Re-elects Cary

JOSEPH B. CARY
Niagara Sprayer & Chemical Co.
Re-elected President

HAROLD C. DAVIES
California Spray-Chemical Corp.
Re-elected Vice-President

LEA S. HITCHNER
Re-elected Secretary-Treasurer

New Era Predicted in Insect Control...Industry Told It Has Responsibility for Intelligent Marketing of DDT...Reed, Rohwer, Goldberg Address Agricultural Insecticide Mfrs. at Annual Meeting at Spring Lake, N. J.

THE responsibility of the insecticide industry in the intelligent marketing of new insecticide developments such as DDT was emphasized at the annual meeting of the Agricultural Insecticide & Fungicide Association, held at Spring Lake, N. J., September 4-6. A new era in insect control work, anticipation of new standards of performance for insecticides, and a new responsibility for the industry were all predicted by government speakers who included Dr. W. G. Reed, chief of the Insecticide Division, Livestock Branch of the War Food Administration, Dr. Sievert A. Rohwer, assistant chief of the Bureau of Entomology & Plant Quarantine of the U. S. Department of Agriculture, Melvin Goldberg, chief of the Insecticides & Fungicides Unit, War Production Board, and S. R. Newell, assistant to the chief, Agricultural Marketing Services, U.S.D.A.

Members of the Association elected the same group of officers and directors for the coming year, the only change being the addition to the directorate of J. Wieder of Stauffer Chemical Co., San Francisco. Officers re-elected include: president, Joseph B. Cary, Niagara Sprayer & Chemical Co.; vice-president, Harold C. Davies, California Spray Chemical Corp.; and executive secretary Lea S. Hitchner. The by-laws of the association were amended providing in the future for rotation of membership on the board of directors, with two directors to be replaced each year. The board for the coming year is a follows:

Joseph L. Batty, of the Co-Operative G.L.F. Soil Building Service; J. H. Boyd, of the Commercial Chemical Company; Eugene T. Doyle, of the Tobacco By-Products & Chemical Corporation; W. S. Gavan, of the American Cyanamid & Chemical Corporation; George F. Leonard, of the Tobacco By-Products & Chemical Corporation; H. B. Mansfield, of E. I. du Pont de Nemours & Co.; George R. Rinke, of John Powell & Co.; Byron P. Webster, of the Chipman Chemical Company; H. DeWitt Whittlesey, of the Sherwin-Williams Company; Mr. Cary, Mr. Davies, Mr. Hitchner and Mr. Wieder.

Among the highlights of the meeting was the presentation of a handsome clock to John Rodda, who

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recently retired as chief of the Insecticides & Fungicides Unit of WPB. Mr. Rodda, who is now with Dodge & Olcott, Inc., was honored by the association membership for the exceptionally able job he did while in the government service.

Among the reports presented was one on DDT by the joint committee representing the AIFA and other associations active in the insecticide field. The report, however, is still being discussed and revised by the committee and the text is not yet available for publication.

IN COMMENTING on the problems which face the industry in the marketing of such new insecticides as DDT, Dr. Reed said in part:

"Release for civilian uses of new insecticides and fungicides developed during the war places a great responsibility on the industry and on the Insecticide Division as well. The situation is more complicated by the fact that many firms without previous experience in this field are entering it. Some of them have no technical advisers or facilities for making tests to determine the efficacy of their products or the possible harmful effects. We are fearful too that some of them may not be familiar with the Federal law governing the manufacture and sale of such products. We are trying to inform as many as possible on how it operates.

"Enforcement is a rather slow process. We have to collect samples of products which have been shipped in interstate commerce and, in many cases, analyze and test them before taking any legal action. Often several months elapse from the time a shipment is made before we can accumulate enough evidence to act, even on what may have been a serious violation of the law. Many misbranding violations could be avoided if manufacturers would submit their labeling to the Insecticide Division first; we have invited them to do so.

"The Inseticide Act provides that labels must not be false or misleading and in certain cases must bear an ingredient statement. Published statements about DDT have led to some false ideas of its effectiveness, and some of the labels we have seen have made entirely unwarranted claims. By submitting proposed labeling, manufacturers will be able to avoid making faulty statements which may later have to be changed or which may even result in legal action.

"Faulty labeling may spring from lack of information about the product, about the insects to be controlled, or about the requirements of the Insecticide Act. The manufacturer of course should have his product sufficiently tested to know what insects it will control and the necessary conditions of use, and limit the claims accordingly. A common fault is the use of broad and unwarranted claims, such as 'Kills Insects', 'Controls Household Insects', and 'For Crawling Insects'. As you know, special treatments are necessary for some household insects, for example termites, and few if any products are suitable for controlling all these insects.

"Directions for use on many labels have been found to be so sketchy as to be misleading. In the case of insecticides and fungicides for use on plants, it is often difficult to give directions which are applicable in all parts of the country. If they are well-known products like calcium arsenate, lead arsenate, Paris green or dormant oil emulsion, it may be enough to direct that they be used according to the directions of local agricultural authorities. But if they are proprietary preparations for which there are no recommendations by local authorities, the directions must be more carefully drawn to insure effectiveness without plant injury. Incompleteness of directions is a frequent form of misbranding.

"When a preparation is sold as both an insecticide and fungicide, it must be properly balanced so that when used at the dilution recommended it will be effective for both purposes. A Bordeaux and calcium arsenate mixture, for example, should be so proportioned that it will contain enough arsenical to poison the insects and enough copper to act as a fungicide when diluted as directed.

"The stability of the product should also be watched, particularly with present-day packaging. Calcium arsenate can and does deteriorate in the presence of moisture and carbon dioxide. Oil emulsions separate out or break and become worthless or even injurious when used. Some of the synthetics have been found to decompose in the presence of alkaline diluents. Careful tests should be made to insure that the product will be effective when it comes into the hands of the consumer.

"Nearly all insecticides and fungicides are poisonous if taken internally in sufficient amounts, yet we frequently find their labels bearing claims such as 'nontoxic', 'nonpoisonous', and 'harmless to man or animals'. Claims of this kind are understood as meaning the product will not cause injury even if swallowed in considerable amounts by a child. Unless true, they are very dangerous, since a parent relying on them may fail to get medical attention for a child who has swallowed the insecticide.

"The claim 'nonpoisonous when used as directed' is somewhat more limited but it is justified only when the product has a low degree of toxicity and when the directions are such that it is actually true. An oil-base cattle spray may cause injury to animals if used liberally on them. Unless the label warns against such use, the product will not be nonpoisonous when used as directed.

"Many of the adulteration violations which come to our attention are due to lack of adequate supervision at the time the products are fabricated. For that reason, I would like to strongly urge that manufacturers give close supervision to the preparation of their products in order to see that the proper ingredients are used in the correct proportions."

DR. ROHWER also emphasized the responsibility of the industry in seeing that new insecticide materials are marketed with intelligence, and with safety to users. He said in part:

"Industry and goverment for four years have had to work as a team. We have done things we never did before. We have explored many fields because we had to win the war. Whether those fields are worth while in the future depends on the attitude of all of us. We prepared statistical information because we needed to control supplies. We thought we also needed to know what would be needed the next season. If those things are worth while in peace, we want to do them not under pressure but on a co-operative, more intelligent basis.

"Another thing we had to do was to determine the status of the bugs. It was a wartime undertaking. Shall we go forward with it? Then somebody has got to find a way to have that mechanized.

"We regimented the use of some short supplies. We had a ceiling for the use-strength of rotenone. That was a mistake; we all know it now. The idea of determining or indicating thresholds of effectiveness is something you and we must get away from. We told the farmer to cut corners. That may be why the farmer feels that if a little is good, more is better. Let's hereafter give him a good material and urge him to use it the way he wants to.

"We are entering a new era. New materials are coming on the market, some good, some not. Many of these will be the things that will direct new standards of performance. I feel that the fact that some of these are more effective for some purposes will be one of the biggest factors in the greater use of insecticides. I don't feel that DDT, 666 or some other things, will put aside any of the standard materials. But they will change the pattern of use. That pattern also will be changed by the development of equipment, concentrates, smokes, aerosols, and wet dusts. All are in the development state. Each will affect the kind of materials and the outlook for use.

"We have developed ways of using materials that will permit us to go into fields of control that we haven't thought about before. Field crop control, for example, has been experimented with only on cotton, one of the lowest-priced crops we have. I think means will be found so that we'll control pests on cereal and forage crops, and we're confident that we can do it profitably on forest crops. All this will need teamwork in research. We must look forward to progress by evolving, not by mutation. That means work, testing materials here and there over the country, and retesting. Experimenting only one season is bad procedure.

"There is one other thing in which we have a common interest. We

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estimate losses from insect pests. Those figures are a challenge to our research people. We're going to have to teach the people to use materials, and to use them right. During the war we've made a start on that.

"I got here and was greeted on every hand with 'DDT'. I want to give you some over-all thoughts occurring to me on that. Industry has a responsibility and a challenge. There are groups of people using DDT under supervision to accomplish the purposes for which those materials were formulater, who are wondering now why we didn't regiment and control the use of DDT. There are people who are wondering about its effect on wildlife; lots of letters are coming in saying that we must find a way to do something about that.

"You and I know that DDT, properly and intelligently used, is just another insecticide. If we're going to stop some of this hysteria the responsibility will be largely on industry. There's going to be a surplus of DDT, and what are you going to do with it? That will have a big effect on the use of DDT in 1946 and '47. The material has been turned back to you. How can we in government help secure its intelligent use, to put it in its place some years from now as one of the newer standard insecticides which itself may some day be replaced?"

THE following report on the raw material and container supply picture was presented by Mr. Goldberg:

"This will be the last meeting with the WPB present. We will be out of business by Dec. 31, and the Insecticides and Fungicides Unit probably by Nov. 1. We are now dismantling an organization formed in 1941 to provide insecticides and fungicides for pest control. By the end of September most of the control orders will be revoked. Rotenone may be an exception. Controls on DDT, copper, arsenicals, all were revoked in August. Pyrethrum and rotenone controls are to be formally revoked Sept. 30 under present plans.

"We believe that by the end of 1945 or early 1946, with improved shipping from Sweden, there will be more than enough arsenic. The insoluble copper position is very comfortable. It is possible that needs in liberated areas may slightly threaten our domestic position. But we believe our producers will foresee that and provide for it. Current rate of DDT production is three million pounds a month. All you have to do is to line up your suppliers.

"There are still two problems on rotenone. The rules for dismantling WPB call for revoking all public purchase programs except where the commodity is short and is subject to world-wide control by the Combined War Materials Board. We're terrifically short on rotenone until the Far East opens up, and we must share the Peruvian output with other nations. We believe we will recommend revoking the public purchase program, but it may not be until the end of the year.

"The nicotine problem is in a state of flux. We hope supplies will be much better next season, but many problems are still to be solved. Basically it is not a problem of production facilities but of raw materials. One of the last functions I hope we'll be able to perform is to bring about more adequate raw tobacco supplies.

"The problem of lead chemicals is tied up with lead metal. My information indicates that by the fourth quarter of 1945 either the lead controls will be removed or the order will remain with a percentage figure for lead arsenate production based on 90 per cent of the amount used for lead arsenate in the last half of 1944.

"Many of the orders on containers will no doubt be removed by Sept. 30. Steel drums, fiber cartons and glass containers should all be free by then. Construction controls will be relaxed to let anyone improve and expand production facilities without authority from WPB. Procedure has been set up so that if a particular piece of equipment is hard to obtain and costs less than $5000, your application may be processed in the field—or in Washington if over $5000.

"Policies on export controls are now being formulated, but it can be said that most materials will be released from control. Calcium arsenate, lead arsenate, copper compounds, rotenone and pyrethrum will continue to require export licenses for the next month or so. After that, mere general export licenses will be enough when you find the buyer and the shipping space.

"I express deep appreciation for the work that your secretary and your Association have done in the past four years. In return I can say that whenever a control order could be lifted, it has been. It's a challenge now from government to industry to carry on the same cooperative work. The past four years has given industry faith in its ability to conduct its own affairs."

Trade Comment On CARNAUBA WAX

The article in the September issue of *Soap and Sanitary Chemicals*, dealing with the confused supply situation in carnauba wax, has apparently helped to focus more attention by floor wax manufacturers upon this almost unbelievable piece of government agency bungling—if it was bungling. A number of carnauba wax buyers have written in to suggest that a meeting be held to enable small users to shape a joint policy to crack the present carnauba wax monopoly. Such a meeting was scheduled to be held October 11 at the Hotel McAlpin, New York, with approximately twenty-five carnauba wax users having indicated their intention of being present. Among those active in arranging for the meeting were Joseph Green of Oil Specialties & Refining Co., Brooklyn, N. Y.; Irving Wexler of Buckingham Wax Co., L. I. City, N. Y., and Melvin Fuld of Fuld Bros., Baltimore, Md.

Max Rieckmann, of Maxol Products Co., Holyoke, Mass., commented as follows, after reading "The Carnauba Wax Mess" last month: "I am one of the smaller users whose existence depends on the procurement of carnauba wax. The current unavailability of carnauba wax supplies in the open market must be very amusing to the large users who have cornered the market. The question is are the smaller consumers going to take it lying down, or stand up and fight. Unfortunately, much valuable time slipped by before the small consumer realized what was being done to him on carnauba supplies. Had we been better informed, we would possibly not be in this mess today. What good are the OPA, WPB, OCR, etc., and so on down the alphabet, if they can't help us? The urgent need now is action, and I suggest that we act jointly rather than individually. My proposal is that a joint industry meeting be called as early as feasible to devise ways and means of securing needed supplies of carnauba wax."

A call for the relaxation of OPA price ceilings on carnauba wax is made by James H. Longshore, president of Continental Car-Na-Var Corp., Brazil, Ind., who says in part: "There is no nation on earth better able to pay a higher price for carnauba wax than the United States. Then, why shouldn't our United States carnauba wax importers be permitted to pay the same price per pound or higher, if necessary, than foreign countries? Why shouldn't our United States importers be permitted by U. S. Federal officials to raise their selling price?"

The American Chemical Society has also taken cognizance of the current carnauba wax shortage in a recent report which charges the OPA with responsibility for the situation. "The OPA hopes to wear down the foreign exporter of carnauba and force him to sell at our ceilings," says the ACS report, adding the comment that "this device may prove futile."

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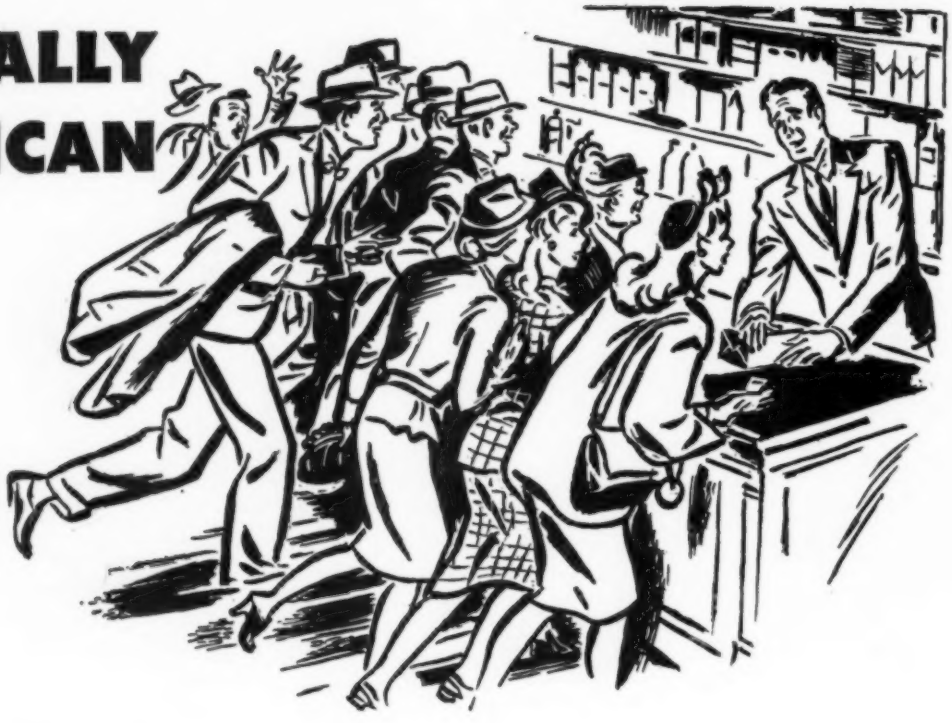

Proud of its wartime production achievement to support the armed forces, industry turns with equal zest to a more prosaic role—one not devoid however of a sustaining interest. The responsibility of our industry is as always to supply better insecticidal material and the progress of the past three years has provided a wealth of new bases for an obviously starved civilian demand. Come August 14th Pyrethrum products moved out with celerity and the much publicized DDT now receives attention to a degree never anticipated.

In cooperation with governmental agencies, our industry assuredly has the added responsibility of channelling DDT to the ultimate consumer, so that it will be formulated, distributed and used with prudence and necessary forethought.

YES, WE HAVE DDT—

May we serve you with our formulations adequate as to description and labels?

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ADULTERATION and MISBRANDING

A Review of Some of the Common Mistakes Made By Manufacturers of Insecticides and Sanitary Products in Labeling their Products in Violation of Provisions of the Insecticide Act of 1910

By
C. C. McDonnell

The Second of a Series of Three Articles on This Subject

EXCESSIVE label claims for ineffective products are by no means an exclusive development of the modern age. Pliny, in his writings in the first century, referring to "mildew" as the greatest curse of all corn, states that "if branches of laurel are fixed in the ground it will pass away from the field into the leaves of the laurel." He also quoted Democritus, who lived between 400 and 300 B.C., as recommending "sprinkling the plants with Amurca of olives without salt to prevent the blight from attacking them and to destroy worms adhering to the roots."

Another recommendation of this time was to carry a bramble frog at night around the field and then bury it in an earthen vessel in the middle of the field. Applications to the plants were also recommended. The materials usually suggested as being the most effective were those having the vilest smell or most offensive taste. However, not all of the recommended treatments were as primitive as these. Sulfur and sandarach (a natural mineral containing arsenic sulfide) were used as early as the first century. But progress in the development of means for the control of these plant pests was slow and it was not until about 1860 that serious consideration was given to it in the United States. Since that time great advances have been made in this field.

While those who are directly engaged in the growing of food crops recognize the menace to agriculture through the destructive activities of insects and fungus diseases of plants, unless protective measures are employed, city dwellers who are not familiar with rural life do not appreciate its economic bearing as it applies to their daily purchases. They fail to realize that the cost of the control of these destructive agencies must be included in the cost of production of the crops being protected, and that they, in large part, must foot the bill through higher prices, not only for the foodstuffs they purchase each day, but for their clothing as well. Nor do they consider the large losses resulting from insect infestation of stored food supplies within their own community, the financial burden of which they eventually must bear in its entirety. All along the line, the public interest is directly concerned with the efficacy of agricultural insecticides and fungicides, for in the final analysis it is the public which pays the bill for their use.

The number of proprietary insecticides and fungicides on the market for agricultural uses is legion and new ones appear constantly. Many worthless preparations have been sold and many others, while not entirely worthless, have fallen far short of what they were represented to be. Much material adulterated and misbranded due to carelessness and ignorance has been marketed. During the early period of the enforcement of the Federal Insecticide Act it was not unusual to find a product recommended for every kind of insect and fungus disease that attacked plants. A product containing 1 per cent of paris green and the remainder inert filler, bore claims such as "No bug can live, no plant can die, as it not only fertilizes and makes them grow, but kills the bugs which infest them." "A perfect combination of bug killer and fertilizer." "Will insure magnificent results and full crops." The preparation was worthless as a fertilizer and of very limited insecticidal value. Another, consisting mainly of water with small amounts of ingredients of little effectiveness as an insecticide was represented as "a cure for all the diseases that trees, shrubbery, flowers, and vines are heir to, and all insects attacking plants whether above ground or those attacking the roots." The information in the criminal action case against the manufacturer, brought under the Insecticide Act of 1910, contained 75 adulteration and misbranding charges based on claims made in the labeling of the product.

A preparation consisting of coal tar oils was claimed to protect fruit trees from insect attack if corn cobs that had been dipped in the solution were hung among the branches.

New Rohm & Haas Insecticide Concentrates Based on RHOTHANE D3 and DDT Now Added to Time-Tested Line

Last month we announced RHOTHANE D3, outstanding new insecticidal agent, which offers the phenomenal killing power of DDT plus *greater safety.*

Now in addition to the chemical products, RHOTHANE D3 and DDT, we offer these new materials in several forms. They are available in solvent solutions, in dust concentrates and in wettable powders.

Our scope of usefulness to the insecticide industry and to agriculture is still further broadened by the addition of these new insecticide concentrates to our line.

Concentrates based on **RHOTHANE D3**	*Concentrates based on* **DDT**
Rhothane S-125: 25% Rhothane D3 in a petroleum solvent.	**25% DDT Solution:** 25% DDT in petroleum solvent.
Rhothane AD-50: Micronized dust concentrate containing 50% Rhothane D3.	**D-50 Dust:** Micronized dust concentrate containing 50% DDT.
Rhothane WP-50: Micronized wettable powder containing 50% Rhothane D3.	**D-50 Wettable Powder:** Micronized wettable powder containing 50% DDT.

Write or wire today for testing samples and detailed information.

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Manufacturers of Chemicals including Synthetic Insecticides . . . Fungicides . . . Plastics . . . Enzymes . . . Chemicals for the Leather, Textile and other Industries

Another, bearing similar claims, consisted of carbon disulfide in a bottle carrying a wick which was to be suspended in the tree.

A number of fraudulent preparations that had wide sale, mostly by peddlers who traveled about the country from orchard to orchard and applied the treatment, charging a fee for each tree treated, consisted of chemicals of no insecticidal value, which were applied by boring a hole in the trunk of the tree and inserting a small amount of the material, or making a slit in the bark and placing small capsules containing the powder under the bark. They bore claims such as "positively kills San Jose scale, blight, borers, worms, lice, bugs and every insect that feeds on the leaf, branch, root or fruit. . . . The only certain method of exterminating all insect pests. . . . Restores youth to old trees and protects the young. . . . Makes fruit more luscious." Such preparations were not only worthless as insecticides but frequently caused serious injury, and sometimes death to the tree, (Fig. 1).*

At the time of the passage of the Insecticide Act of 1910, lead arsenate was a comparatively new product in the insecticide field and most of the material sold at that time was in paste form, containing about 50 per cent of water. Later the dry form was put on the market and has replaced the paste practically entirely. Some of the early products were poorly manufactured, containing excessive amounts of arsenic in water-soluble forms, and much injury to fruits resulted through the use of such material, (Fig. 2).

Calcium arsenate came into use in 1917-18, and its value for the control of the cotton boll-weevil was discovered in 1919-20. This led to a great demand for it almost overnight and among those who began making it were a number of manufacturers who lacked the proper facilities or basic knowledge for its production. Much of it was of very poor quality, both physically and chemically. Some was in granular form and entirely unsuited for use as a dust application and it frequently contained arsenic in soluble form to an extent that caused it to seriously injure the plants on which it was applied. (Fig. 3). Today it is rare to find lead or calcium arsenate on the market that is not of uniformly high quality.

After the boll-weevil became so wide-spread and destructive to the cotton industry in the United States, and before the development of calcium arsenate for its control, many preparations for use against this insect, most of which were worthless or of limited value, were marketed. These have practically disappeared from present day trade.

Fungicides

IN GENERAL, insecticides are not applied until after the insects appear. On the other hand, fungicides must be applied before the disease in order to prevent infection of the plant. A plant disease gives no warning in

Fig. 1. Tree injury from Insecticide Pills inserted under the bark. Photo courtesy U. S. D. A.

Fig. 2. Injury to apples by adulterated insecticide and fungicide spray containing soluble arsenic.

All Praise . . .

To the Nation's Sanitary Supply Dealers. . .

THEIR understanding patience in the face of severe shortages . . .

THEIR continued good humor in dealing with unreasonable customers . . .

THEIR long hours of added labor . . . their earnest zeal in promoting the health requirements of a **NATION AT WAR** . . .

THEIR bond sales . . . Blood donations . . . Civilian defense activities . . .

THEIR noble Sons and Daughters in every branch of our Armed Services . . . many of whom have made the supreme Sacrifice that you and I may remain FREE . . .

THEIR burning desire that the Peace to come will last forever . . . Their determined intention to dedicate their future to that end . . .

YES, All Praise, All Hail, to the SANITARY SUPPLY DEALERS OF THE NATION. We join the millions you have so diligently served during the trying times now passing, in saying, "THANKS FOR A JOB WELL DONE"!!

Marshall L. Magee, Vice-President

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Fig. 3. Cotton plant defoliated and seriously injured by adulterated calcium arsenate.

Fig. 4. Apple tree defoliated from the use of adulterated copper fungicide.

Fig. 5. Apple. Check tree. Untreated.

advance—one cannot see the organism that causes it—and after infection has occurred it is too late to cure the disease and prevent damage to the crop.

Control measures for plant diseases were slower in development than measures for the control of insects for the reason that their causes were more difficult to determine. Early methods of treatment were based mainly on superstitions, although it was known that sulfur and certain combinations of copper possessed value in protecting crops against certain diseases before the cause of the diseases themselves were known. Rational measures of control, however, came only after such knowledge had been obtained, and the history of plant protection follows closely the history of the scientific study of the organisms responsible for disease.

One of the earliest chemical preparations found to be effective in controlling some of the more important fungus diseases of fruits and vegetables consisted of a mixture of copper sulfate and lime known as "bordeaux mixture." During the early years of its use it was prepared by the grower, but commercial mixtures, and other compounds of copper have largely replaced the home-made product. Much of the material first marketed caused serious injury to treated trees and to the fruit, due to the mixtures not having been properly compounded, or to faulty directions for use. (Fig. 4 and 5.) This is also true of some of the products of this type that are being sold today.

Various types of products for the treatment of tubers, bulbs, and seed grain for the control of damping-off, smuts, and other seed- and soil-born diseases that cause heavy losses to the grower, have been marketed. Most of these products now being manufactured are effective for the purposes for which they are recommended but some have been found that caused more damage than the disease they were intended to control through injury to the germination of the treated grain. (Fig. 6.)

Problems of the Manufacturer

THE insecticide and fungicide manufacturer occupies a responsible position. These are specialized industries and require much knowledge and scientific control in order to be assured that effective products will be produced. The control of insects and fungus diseases of fruits and other plants is not the simple and easy problem that many think, but is a highly complex one, involving the leading sciences, including chemistry, entomology, plant pathology, biology and horticulture.

Products used as insecticides and fungicides include those from a simple element, such as sulfur, to the most highly complex organic compounds and mixtures. The day of home-made products has passed. The farmer or user cannot determine before use whether the product he purchases will be effective but must rely on the material he buys as being properly manufactured and correctly labeled. The relatively small amount he might lose in the cost of a worthless material is insignificant in comparison to that resulting through lack of control of the pest for which it is to be used.

The manufacturer of insecticidal and fungicidal materials and "concentrates" who sells to small manufacturers who use these ingredients in making up products to be sold to the public, also owes them a responsibility to see that these products are of the composition they are represented to be. The small manufacturer, in most cases, does not have the facilities for analyzing these materials and must rely upon the statements of his supplier. Unfortunately such concentrates are not always as represented. When the officials engaged in the administration of the law repeatedly receive statements from these small firms who have been cited for adulteration or misbranding, that they buy their material from Manufacturer "A", one cannot help but have a strong suspicion that Manufacturer "A" is cheating his customers.

During periods of war and disturbed economic conditions, when the normal process of operation is more or less disturbed, misbranding and adulteration are more prevalent. A shortage of skilled labor, the inability to get proper raw materials, making substitutions necessary, and the de-

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the persistent perfume in the spray you used?
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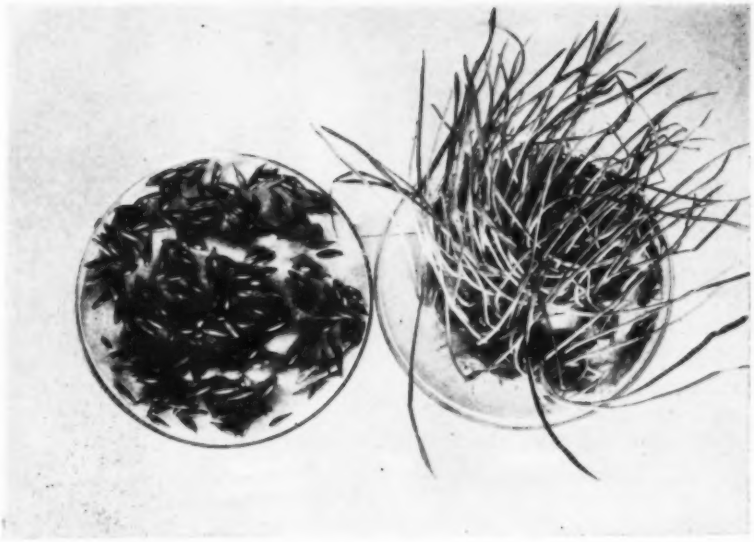

Fig. 6. OATS. (Left) Seed treated with a commercial seed disinfectant. Germination destroyed. (Right) Uninfested seed, untreated, showing normal germination.

mand for greater output in order to increase the food supply, all add to the difficulties of the manufacturer, and at such times he is less blameworthy. However, these conditions should not be made an excuse for carelessness. Just as serious damage may be done to a growing crop or orchard, or injury to animals, through the use of a product containing a dangerous ingredient added to it through accident or carelessness, as if it were done intentionally and knowingly.

Another condition that frequently leads to difficulties is the failure to determine whether the ingredients are compatible when mixed. It frequently happens on mixing an insecticide and a fungicide to make a "dual purpose" spray that the effectiveness of one or the other is reduced or a reaction may take place rendering the product unsafe to use on vegetation. A similar condition may result through deterioration of the material between the time of its manufacture and the time of sale. In all cases such as here cited, the responsibility rests squarely on the manufacturer.

Before placing a new product on the market, its effectiveness in controlling the insects or plant diseases for which it is to be used should be accurately determined. In some cases this may require several years of testing in different localities having varying climatic, soil and other environmental conditions before unqualified recommendation can be made. Other factors to be considered are its toxicity to the plants and the soil; whether or not it will leave a toxic residue on the fruit or plants that may be injurious to man or animals when used as food; its toxicity to beneficial insects that are necessary for pollenization, or those that produce food, such as honey bees; and the effect it may have on treated fruit—whether it adversely affects its color, flavor, sweetness, or the time of its ripening.

Adulteration and misbranding and trade abuses can never be stopped entirely—the best that can be accomplished through law enforcement, education and a higher standard in trade ethics, is to hold them in check.

Common Errors in Labeling

IN PREPARING labels the general tendency is to exaggerate and overstate the effectiveness of the product, or what is equally as objectionable, to employ phrases that are not clear and may be read in different ways, leaving a misleading impression. Such statements constitute misbranding under the law. The following claims are examples of this type:

"Kills all plant pests." "The most effective insecticide known." "An ideal insecticide." "For the destruction of insects and parasites of all kinds that infest plants." "Sure death to bugs and insects." "Drives away insects, bugs, worms." "Exterminates insects." "For blights, rusts, scabs and other fungus diseases." "The best remedy known for plant diseases." "100 per cent active."

Under the terms of the law any representation made on the label regarding the article, whether by words, picture or any other manner that may be misleading, constitutes misbranding.

A recommendation for use of an insecticide or fungicide that is proper for one locality may not be suitable in another against the same insect or disease, due to a difference in climatic conditions, or to a difference in the resistance of insects in different localities. It has also been noted that some insects have developed a certain amount of immunity to poisons after they have been subjected to the same treatment for a number of years. All of these factors must be taken into consideration in preparing labels for products that are offered for general distribution. It is particularly important, in the case of fungicides, that the directions for use be plain and specific as to time of application, dosage, number and method of application.

The use of the term "when packed," in connection with the statement of composition, does not relieve the manufacturer of responsibility if examination of the product after it has been shipped in interstate commerce shows it to be of different composition. The statement of composition must be correct as long as the product is being offered for sale.

It is a mistake to copy the other fellow's label. It may be wrong and it is no defense to give this as authority for your claims. In a case arising under the act, the defendants plea was that many others made like claims. The court replied, "Yes, but you got caught first."

Remember: The courts in interpreting the law consider it from the standpoint of the layman or ordinary purchaser, whom it is primarily designed to protect.

N O W - -

DDT is available — as such and in compositions readily adaptable for your use.

Due to the unprecedented demands for fly sprays and other insecticides containing DDT, many insecticide manufacturers are introducing this powerful chemical into their formulations. Added in the recommended quantities of technical quality DDT, this toxicant will give extremely high kill of many insects. The residual properties are such that the toxicity to insects persists over long periods. The residual effect emphasizes the value of using this new material, but DDT also contributes to the efficacy of contact type of household sprays.

Geigy can now supply GNB-A — DDT* for processing to meet civilian insecticide requirements.

Compositions containing this remarkable toxicant can also be supplied by Geigy for further extension by spray and dust manufacturers.

As originators of DDT insecticides, these products represent the results of comprehensive research in the laboratory and field.

Questions concerning DDT and compositions containing it will be gladly answered. As investigations of Geigy and others yield data applying to your problems of pest control, we shall endeavor to bring them to your attention.

*Registered in the U. S. Patent Office. Insecticidal compositions containing DDT are covered by U. S. Patent 2,329,074.

GEIGY COMPANY, Inc.

Insecticide Division

89-91 Barclay St. New York 8, New York

TECHNICAL Briefs

From Current Literature in the Sanitary Products Field

Containers for DDT

THE Research Department of Continental Can Co., New York, has recently issued a report on DDT which includes some very interesting material on the packaging of DDT formulations, in addition to reviewing the general background of the development and use of DDT insecticides. The paragraphs on packaging follow:

In order to determine the packaging requirements of the different types of DDT formulations, a test pack was made by Continental Can Company, Inc., in cooperation with Geigy, Inc. Six different products representing five types of formulations were packed. A list of the products follows:

Product	*Type of Formulation*
1—GNB-A-DDT (technical)	Technical DDT
2—Neocid A10 Powder	Dust
3—Gesarol A20 Spray	Suspension
4—Neocid AD5 Spray	Solution
5—Neocid A25 Emulsion	Emulsion
6—Experiment 195	Emulsion

Each of the six products was packed in cans made of the following plates, 1.25# hot dipped tin, 0.5# electrolytic tin, Special Coated Manufacturer's Terne (SCMT), enameled (phenolic) Bonderized steel, and enameled (phenolic) steel plates. Products 1 to 3 (powders) were packed in small Tripletite cans; products 4 to 6 (liquids) were packed in eight ounce "F" style cans. Filled cans of each type were stored at room temperature and in rooms held at 98° F. and 130° F. After a storage period of five months, the conclusions drawn from this pack are as follows:

Technical DDT

Technical DDT can be packed and stored at temperatures under 98° F. in containers made of plain or enameled tin or terne plates, or enameled untreated or chemically treated steel plates without affecting the product. Caking and slight discoloration of the product occurs at storage temperatures of 98° F. or above.

Dusts

DDT dusts can be packed and stored in containers made of plain or enameled tin or terne plates, or enameled untreated or chemically treated steel plates without affecting the product.

Suspensions

DDT suspensions in powder form can be packed and stored in containers made of plain or enameled tin or terne plate, or enameled untreated or chemically treated steel plates without affecting the product.

Solutions

Deodorized oil solutions of DDT can be packed in containers made of plain or enameled tin or terne plates, or enameled untreated or chemically treated steel plates without affecting the product. Due to the highly penetrating nature of the oil, considerable care must be taken in manufacturing cemented side seams on the steel plate cans so as to prevent leakage of the product at this point.

Emulsions

Emulsions containing DDT, toluene, and an emulsifier cannot be packed indefinitely in containers made of plain tin or terne plate, or enameled untreated or chemically treated steel plate without experiencing some corrosion of the container and subsequent contamination (turbidity and discoloration) of the product. The corrosion appears to be caused in part by a slight deterioration of the product (liberation of HCl) especially at temperatures in excess of 98° F. HCl is probably liberated.

Although plain 1.25# hot dipped tin plate cans are not entirely satisfactory for packaging emulsions, these cans are the best of those tested and would probably have a satisfactory storage life for a period of a year at temperatures below 98° F.

H. E. Peterson
W. G. Palmer
Packaging Laboratory
Research Department
CONTINENTAL CAN CO., Inc.

Effect of DDT on Honeybees

Some observations as to the effect of DDT on Honeybees are made by J. E. Eckert, University of California, in an article in the June, 1945, issue of the *Journal of Economic Entomology*. Mr. Eckert's conclusions are summarized as follows:

CONCLUSIONS. — The results confirmed previous reports that DDT acts both as a contact and as a stomach poison to bees. Since the bees did not all die when various concentrations of the dust were shaken on them in their hives, apparently the dust does not always kill bees upon contact with their bodies. Possibly, specific quantities of the poison must be absorbed through portions of the bee's external anatomy in order to be injurious. Since the comparatively large percentages of DDT in the pollen paste had no observable effect on the population or brood of the colonies to which the mixture was fed, perhaps DDT in dust form is less injurious than the arsenicals when fed in this manner. If, however, bees were continually exposed to DDT dusts while collecting pollen, the results might be entirely different from those indicated by these preliminary experiments.

Why the bees were killed by queen-cage candy containing small amounts of DDT, but not by pollen paste containing much larger quantities, cannot be explained until we know more about how the pollen paste is converted into food for adults and brood. Apparently DDT is less injurious than arsenicals when mixed in powdered form with pollen paste.

From the small amount of information available as to its effect on bees, if DDT should be used as carelessly as other insecticides are used at present, there is reason to believe that it might become more destructive than any other insecticide now known. Conceivably, however, its use and distribution might be more adequately regulated, so that only minimum amounts would be used to take the place of arsenicals; and the material might be confined to the plants treated and not applied when they are in bloom. Under these conditions its use might even lower the high mortality of bees now caused by promiscuous, inefficient, and unregulated application of millions of pounds of arsenicals. The beekeeping industry is doomed in those areas where arsenicals and other toxic substances are broadcast by air-

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planes and powered blowers without regard to the damage the drifting poisons might cause. The inclusion of one more chemical substance in such unregulated practices would simply bring total destruction to the beekeeping industry in a shorter time; and this catastrophe would force the development of more efficient equipment for applying insecticides, together with more adequate regulation of the distribution and use of the chemicals.

Moth Proofing Problems

Estimated figures of the damage done by moths and carpet beetles vary from 100 to 200 millions of dollars per year for the United States. These figures indicate that the temporary protection resulting from treatments in homes, stores and other places, is very unsatisfactory, since the treatment has to be repeated. A lively interest therefore exists in the possibility of obtaining merchandise that is permanently mothproofed before it enters the store.

The following list has been established in the diminishing order of importance of mothproofing: Bathing suits, blankets, women's apparel, knitted outerwear, winter sportswear, upholstery, draperies, hand knitting yarns, rugs and carpets, woolen underwear, men's overcoats, and men's formal wear,—most items being used seasonally and then stored for a period.

A product which has proved satisfactory for permanent mothproofing is "Eulan CN," chemically pentachloro - dihydroxy - triphenyl - methane-sulfonic acid. This compound is colorless but has the properties of a dye. It is taken up by wool from a hot acid bath. A number of wetting agents are compatible with the product. H. Luttringhaus. *Rayon Textile Mo.* 26, 349-50 (1945).

New Antiseptic

A new antiseptic, "Phenoxetol," has been found effective in experimental trials. Chemically it is the monophenyl ether of ethylene glycol, $C_6H_5OC_2H_4OH$. It is notable in that it is active against *Pseudomonas pyocyanea*, a pyogenic organism resistant to nearly all of the other newer antiseptics including penicillin. Phenoxetol is weakest against staphylococcus, better against streptococcus, and strongest against pyocyanea. It is claimed that incorporation of this compound in a penicillin cream eliminates pyocyanea. *Manufacturing Chemist* 16, 253 (1945).

Insect Repellents

It seems certain that with the war over, insect repellents will assume an important place among civilian products. Out of the thousands of substances which have been investigated for insect-repellent power since our Armed Forces were sent to world battle areas, only a few have been found efficacious. Combinations of dimethyl phthalate, "Indalone" and Rutgers 612 in the proportions of 3:1:1 or 1:1:1, have been adopted by the Armed Forces as giving good protection against mosquitoes, flies, chiggers, immature stages of ticks, sand flies, buffalo gnats and other insects. These repellents were developed by private research laboratories.

Recently the government took out a patent (U. S. Patent No. 2,356,-801) to cover the use of combinations of dimethyl phthalate with various proportions of butyl mesityl oxalate and 2 - ethyl - 1,3 - hexane - diol. The methods for testing repellency do not now include our common mosquito since this was of no great concern in war areas. It is known, however, that repellents for the yellow-fever mosquito will also repel the common mosquito of the U. S. A. E. G. Thomssen. *Drug & Cosmetic Ind.* 57, No. 1, 46-7 (1945).

DDT as a Sheep Dip

In the laboratory sheep wool dipped in an emulsion containing 0.5 per cent of DDT was toxic to laboratory-bred specimens of the sheep blowfly, *Lucilia sericata*. Also when gravid females of *L. sericata* were placed on the fleece of DDT-dipped sheep, tests showed that even 5 weeks after dipping, 30-60 seconds of contact were sufficient to have a toxic effect on the flies. J. B. Cragg. *Nature* 155, 394 (1945).

DDT for Marine Use

The new insecticide, DDT, gives promise of eliminating barnacles from ships' bottoms and other marine structures. Barnacles failed to attach themselves in six months' time to wooden panels coated with a DDT containing paint developed at Oregon State College. Control boards treated with the ordinary antifouling paints were heavily covered with barnacles and other salt-water fouling animals after 3 months' submersion.

The anti-barnacle paint was one of a large group tested at the Yaquina Bay Fisheries Laboratory operated by the Oregon Agricultural Experiment Station. Since DDT is insoluble in water, the expectations are that its antifouling properties may greatly exceed the initial test period of 6 months. Studies are being continued to determine the efficiency of DDT as antifouling agent for marine animal forms other than barnacles, as a control for wood-boring marine mollusks and crustaceans, and to ascertain if the insecticide exhibits differences in antifouling properties for the various species of barnacles. *Science* 102, No. 2640, p. 10 (1945).

Parasiticide

The gamma isomer of hexachlorocyclohexane has extraordinary insecticidal properties. It will probably prove of great value in the treatment of scabies, including sheep scab in animals, and sarcoptic scabies in animals and also in man. E. L. Taylor. *Nature* 155, 393-4 (1945).

Control of Malaria Mosquitoes

Under East African conditions, anti-malarial oils were found preferable to Paris-green dusts as mosquito larvicides. A cottonseed tarkerosene in a 3:1 mixture was very efficient and more economical than the oil treatment. G. H. E. Hopkins. *E. African Agr. J.* 8, 42-6.

Formamide as Disinfectant

Formamide, either by itself or mixed with other suitable substances, is used as a disinfectant and preservative. H. Kaufmann. German Patent No. 743,310.

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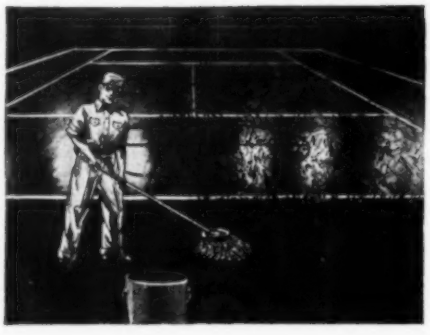

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Germicide Committee Reports

The report of the Standard Methods Committee for the Examination of Germicides and Antibacterial Agents has been published in the August, 1945, issue of *The American Journal of Public Health.* Prepared under the direction of Stuart Mudd, University of Pennsylvania, chairman, it covers reports by referees and assistant referees on the following topics: Chemical Antiseptics, by Henry Welch; Chemical Disinfectants, by Charles M. Brewer; Antibiotic Agents, by Selman A. Waksman; Disinfection of Air by Germicidal Vapors and Mists, by O. H. Robertson; Disinfection of Air by Ultra-violet Irradiation, by Alexander Hollaender; and Fungicidal and Fungistatic Agents, by C. W. Emmons.

Determination of DDT

The principal ingredient of technical DDT can be determined in concentrations ranging from 0.001 to 0.01 per cent by a colorimetric procedure using the Friedel-Crafts reaction. The reaction produces a compound with a stable color, orange by transmitted light and greenish orange by reflected light. The per cent transmission of the colored compound dissolved in benzene is read in the photoelectric colorimeter at 420 mμ. This value, interpolated on the standard curve, gives the concentration of DDT. The use of an alternate solvent, ethylene chloride, having a peak absorption of 530 mμ is described. E. L. Bailes and M. G. Payne. *Ind. Eng. Chem., Anal Ed.* 17, 438-40 (1945).

Hydrogen Peroxide Bleach

Products having enhanced bleaching, germicidal, disinfectant and deodorant powers are prepared by addition of certain wetting agents to 100-volume aqueous hydrogen peroxide solution. If higher alcohol sulfates such as "Gardinol WA," or alkyl aryl sulfonates such as "Nacconol NR," are used, the resultant solution attacks aluminum and is best shipped in glass. If sulfonated petroleum products such as "Ultrawet" or sulfosuccinate ester such as "Aerosol AY," are used, the resultant peroxide solutions may be shipped in aluminum containers. Excessive foaming during handling may be controlled by addition of a small amount, less than 0.1 per cent, of an alcohol such as heptadecanol or capryl alcohol. W. S. Riggs and R. Lehmann, to The Pennsylvania Salt Manufg. Co. U. S. Patent No. 2,371,545.

Quaternary Ammonium Salts

A study was made of the bactericidal and bacteriostatic properties of the homologous series of quaternary ammonium salts derived from tetramethyl ammonium bromide. Bactericidal action became evident when one methyl group was replaced by a nonyl group. Further increase in the chain length increases the germicidal potency with a maximum at cetyl trimethyl ammonium bromide. The bactericidal and bacteriostatic properties of this compound increase considerably with increasing pH. At pH 8.0 its phenol coefficient for *Staph. aureus* at 37° C. was 1200. When added to nutrient broth, 3 grams per cc. will prevent growth of *Staph. aureus.* Gram-positive and gram-negative species are equally affected. In the presence of serum a considerable amount of the germicidal potency is lost. J. C. Hoogerheide. *J. Bact.* 49, 277-89 (1945).

Germicidal Liquid

A detergent germicidal liquid for surgical instruments is made from the following:

Ethyl alcohol	70.0 parts
Water	10.0 parts
Formaldehyde	4.0 parts
Hexamethylenamine	0.063-0.5 parts
Thymol	0.063-0.5 parts
Solvent	15.0 parts

The solvent is a mixture of 1 part of methanol with 0.5-2 parts of acetone. A. L. Waugh. U. S. Patent No. 2,347,012.

DDT as a Fungicide

DDT was of no value as a fungicide against the organisms: *Ophiobolus graminis* Sacc., *Colletotrichum tripolii* Bain and Essary, *Pleospora herbarum* Pers., *Ascochyta imperfecta* Peck., *Pseudoplea trifolii* (Rostr.) Petr., *Urocystis tritici* Koern, and unspecified damping-off organisms. D. O. Norris. *J. Council Sci. Ind. Research* 17, 289-90.

New Insecticides

Insecticides and fungicides of low water-solubility and good light- and air stability are produced by the reaction of diaryl guanidines with 2,4-dinitrophenols containing an aryl, alkyl, cycloalkyl, or aralkyl group. The salts thus obtained are high-melting crystalline solids of low water solubility, and having excellent toxicity against insects and parasites. They are without ill effects on growing plants. F. B. Smith and J. N. Hansen, to The Dow Chemical Co. U. S. Patent No. 2,367,534.

Fungicides for Leather

Processes are being developed for the incorporation of fungicidal agents in leather during its manufacture, the agents most used being *para*-nitrophenol and *beta*-naphthol. Articles made of leather not previously treated to prevent mold growth should be sprayed with a 0.4 per cent solution of *para*-nitrophenol or 1 per cent of *beta*-naphthol in 50 per cent industrial alcohol. *Chem. Trade J.* 116, 712 (1945).

Parasiticides

New compounds which are parasiticides belong to the class of polyhalophenol salts of alkylene diamines. The final product is obtained in the form of a "mono-salt," by which is meant a compound of 1 molecule of phenol and 1 molecule of a diamine, or in the form of a "di-salt," by which is meant a compound of 2 molecules of the phenol and 1 molecule of the diamine. The compounds are relatively insoluble in water, somewhat soluble in common organic solvents, stable to light and air and not appreciably affected by carbon dioxide. They are suitable for use as bactericides, insecticides and fungicides.

The compounds may be used either as a dust or a spray. For dusting, 0.5-5 per cent of the compound is mixed with diatomaceous earth, volcanic ash, bentonite, wood flour, etc. In sprays 15-25 per cent of the compound is suspended in water. Wetting, sticking, and dispersing agents may be added. E. C. Britton and J. N. Hansen, to The Dow Chemical Co. U. S. Patent No. 2,362,464.

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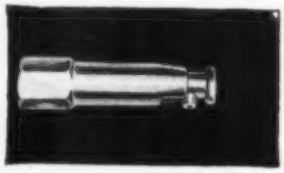

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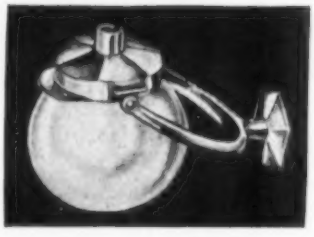

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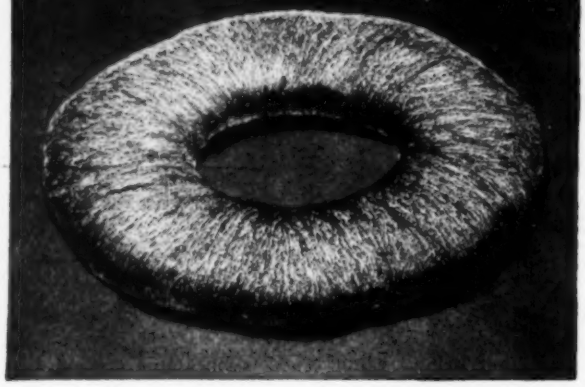

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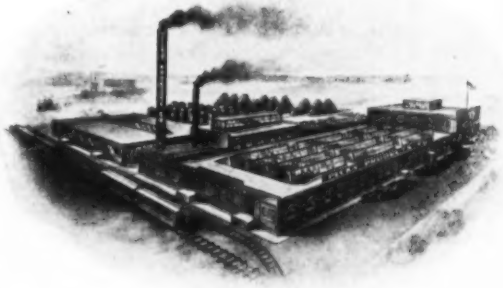

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Make Your Own Pine Oil Disinfectant with
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Source for Potash Soaps of All Types
PASTE OR LIQUID

Headquarters for Sanitary Supplies since 1918

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LIQUID FLOOR WAX

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☆ Noted for top-quality performance under all ☆
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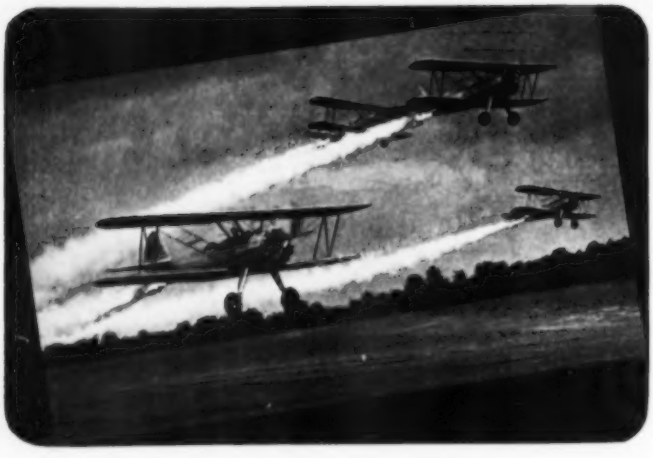

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Dust CARRIER?
Call in WHITTAKER

231

Whittaker has in stock a variety of dust carriers that have demonstrated their efficiency as diluents of DDT in insect and fungus control.

All Whittaker dust carriers comply with U. S. Agriculture Department standards—and Whittaker experience in supplying these carriers for years is at your disposal in helping you select the ones best suited to your needs.

Whittaker can supply recommended types of carriers in any particle size required—and Whittaker laboratory control assures you that shipments will be of uniform high quality.

Consult Whittaker . . . first . . . for technical assistance on DDT dust carrier problems. You'll find it pays.

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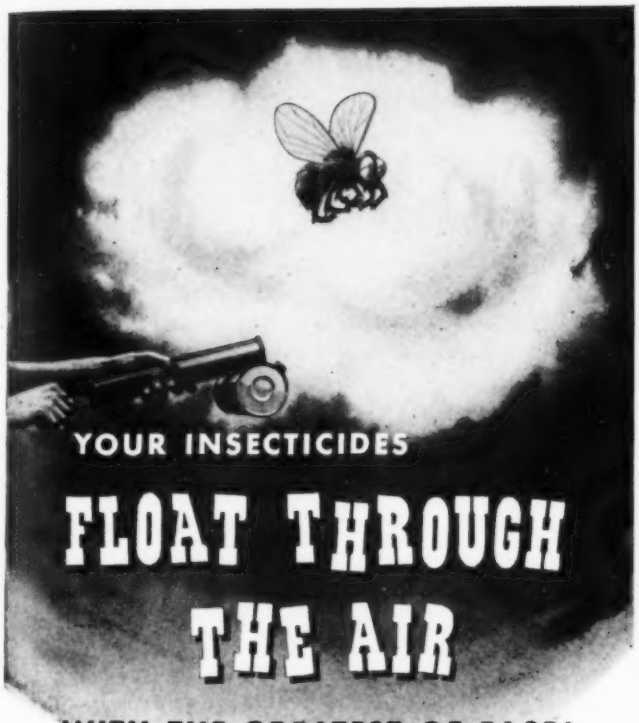

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PENN-DRAKE INSECTI-SOL
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The longer your insecticide floats through the air, the longer the *killing power* is effective.

Choose INSECTI-SOL for YOUR insecticide to provide the longer killing power and for a perfect base that is crystal clear, odor-free—and WILL NOT STAIN CLOTHING, DRAPES, RUGS, etc., because it evaporates *entirely* when its job is done!

Write Dept. 108 for "case histories" in which INSECTI-SOL has played an important role in building more successful insecticide business.

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Makers of White Oils (U. S. P. and Technical); Petrolatums (all grades and colors); INSECTI-SOL (deodorized insecticide base); Odor-Free and other Naphthas; Petroleum Sulphonates; Waxes; Industrial and Motor Lubricants and Greases; Fuel Oils and other petroleum products.

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Standardize on isopropyl for your alcohol requirements. Manufacturers of soaps and sanitary chemicals everywhere are reporting satisfactory results when isopropyl replaces other alcohols in their products.

While the present demand for alcohol is at an all-time high, we believe that our greatly increased production of Petrohol will keep ahead of the industry's requirements. Avoid the nuisance of permits, inspections, etc., plan now to use isopropyl in your formulas. Write for details regarding the use of isopropyl in

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MIRANOL S S **MIRANOL L F Powder**

Foaming characteristics. 115 to 130 cc of foam in 1/20% solution, standard shake tests, 20 shakes.
Foam stability ..... Long lasting, creamy foam.
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Price ..... Miranol SS and Miranol LF Powder are low cost detergents, priced competitively.

Write today for free working sample, detailed technical literature, prices, and name of your nearest distributor.

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TRADE NEWS . . .

Nu-Way Building New Plant

A new factory for Nu-Way Products Company, manufacturer of bleach, cleanser and disinfectant of the chlorine type, is under construction at Third and Locust Streets, North Little Rock, and will be in use by January 1, replacing a structure occupied since the firm was launched August 1, 1944. The product is sold in eight states and output is more than 8,000 gallons per day. J. C. Sullivan, formerly of Bristow, Okla., is owner and operator. Mr. Sullivan's brother operates their original plant at Bristow, and new factories are planned at Nashville, Tenn., and Muncie, Ind.

Cre-O-Tox New Quarters

Cre-O-Tox Chemical Co. moved into its newly constructed building at 2670 Broad Ave., Memphis, Sept. 5, the company announced late last month. Its first unit, built of concrete, fire-proof construction, is adjacent to Union Railroad trackage.

New Johnson Memphis Quarters

S. C. Johnson & Son, Inc., Racine, Wis., announced recently that their branch in Memphis will be moved into a new warehouse at Thomas St. and Highway 51, about Nov. 1. The new branch will have 2,500 square feet of office space and 9,000 square feet of warehouse in the building which will be one-story high and have a glass brick front.

Melvin Goldberg Joins Geigy

Melvin Goldberg, for the past four years chief of the Insecticides and Fungicides Unit of the Chemicals Bureau of WPB, has joined Geigy Co., Inc., New York, producers of and patent holders on DDT. He became associated with the company effective Oct. 1. Prior to joining the W.P.B., where his activities were mainly in the insecticide and fungicide field with particular emphasis on DDT, pyrethrum, rotenone and arsenicals, Mr. Goldberg had conducted research for the U. S. Bureau of Animal Industry and the United States Public Health Service. He holds

MELVIN GOLDBERG

an A.B. degree from Johns Hopkins and a B.S. from Georgetown University.

Diehl to Tour Brazil

William Diehl, of William Diehl & Co., New York wax importers, left for an extensive tour of Brazil in order to secure carnauba and ouricury wax, the company announced early this month. Mr. Diehl was accompanied by his wife.

Creco Co. Honors Three

Creco Co. of Long Island City, N. Y., honored three of its employees who have been with the firm more than 20 years at a luncheon, recently, at the Hotel Astor, New York. Honored were Joseph Zwick, chief chemist; and Joseph J. Shamow and S. W. Moses, salesmen. Benjamin Newman, president of the company, which manufactures sanitary products, was toastmaster.

Dr. H. O. Calvery, 47, Dies

Dr. Herbert O. Calvery, 47, chief of the Division of Pharmacology of the Food and Drug Administration, died suddenly at his home in Washington, Sept. 23. He went with the government in 1935 to assist in the organization of the division and he became chief of the Pharmacology Division in October, 1936. He was educated at Greenville College and the University of Illinois. Much of his war work dealt with antimalarials, DDT, war gases, etc.

W. A. Fillman Joins Hollingshead

W. A. Fillman, formerly branch manager and district manager of Good Brothers, Inc., distributors for Best Foods Co., was appointed promotion manager of R. M. Hollingshead Corp., Camden, N. J., the company announced early in October. Before joining Hollingshead, Mr. Fillman had been with Best Foods Co., the two connections covering a period of eight years. He was also assistant to the South Jersey divisional sales manager of Hoffman Beverage Co., Newark, N. J., for three years. Mr. Fillman spent the war years from 1942 to September, 1945, as supervisor of material control for General Motors Corp., coordinating production and production control.

Botanical Garden 50 Years Old

In commemorating its fiftieth anniversary, the New York Botanical Garden, Bronx Park, N. Y., recently has issued a special 24-page and cover, illustrated booklet, "The Significance of Plants in War and Peace." In it the botanical research done to assist industries concerned with essential oils, insecticides, disease-inhibiting molds, palm oils, etc., is mentioned. In an effort to expand and maintain its activities in peacetime the Garden is seeking to raise $4,900,000 as a Fiftieth Anniversary Fund.

Grant Dorland Writes on DDT

DDT and its use in controlling stable flies are discussed in an article, "The Control of Stable Flies with DDT", written by Grant A. Dorland, one of the publishers of *Soap & Sanitary Chemicals* magazine, in the Sept. 1, 1945, issue of *The Thoroughbred Record*, official publication of the Kentucky State Racing Commission. After discussing some of the early history of DDT and its properties, Mr. Dorland reviews some practical experimental

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Top Quality and Performance

Buckingham Wax Company
Long Island City, N. Y.
Warehouses: Jacksonville, Fla., and Dallas, Tex.

work carried out by him on his Lexington, Ky., horse breeding farm. On the basis of these experiments, Mr. Dorland concludes that "DDT does promise our horses relief from flies while they are being kept up during the day. Horsemen interested in obtaining this relief next season should make plans right now to have their barns properly screened next Spring."

Claims Improved DDT Product

A fungicide which will control apple scab, a DDT formulation four times as effective as DDT powder and a selective herbicide for weeding large acreages of cereal crops were announced early in October by U. S. Rubber Co., New York. The new DDT preparation, called "Deetone," contains DDT dissolved in a synthetic organic oil and is claimed to control aphids and mites as well as insects killed by normal DDT. In this form, it is claimed the usefulness of DDT is accordingly extended and when used in combination with the oil a given amount of DDT will cover approximately four times as great an area as in the normal powder. "Phygon," the new U. S. Rubber fungicide is an organic chemical containing 2,3-dichloro-1,4-napthoquinone. It is claimed that "Phygon" will control brown and bitter rot of apples and stone fruits, charry leaf spot, downy mildew on beets, azalea blight, spetoria celery blight and alternaria and anthracnose of tomatoes. "Phygon" is a light brown powder, insoluble in water, and may be used as a dusting powder on seed or dispersed in water as a liquid foliage spray. The selective weed killer is called "Polon," and is recommended for use on lawns, golf courses and for weeding fields of oats, rye and barley by spraying.

John Marcuse in Hospital

John Marcuse, vice-president of the West Disinfecting Co., Long Island City, N. Y., and a member of the Board of Governors of the National Association of Insecticide & Disinfectant Manufacturers, is now recuperating at his home following two weeks spent at the Doctors' Hospital, New York, as a result of a recent emergency operation.

Durham Chemical Co. Formed

Wallace Durham, resigned manager of the Nico-Dust Mfg. Co., division of Stauffer Chemical Co., recently has formed hs own company located at 3850 Bandini Blvd., Los Angeles. The company will engage in the manufacture and distribution of agricultural chemicals, insecticides, fungicides and spray materials. Mr. Durham has been in the field since 1922 and during much of this time has specialized in the development of specific products to meet special spraying and dusting problems.

New Socony Weed Killer

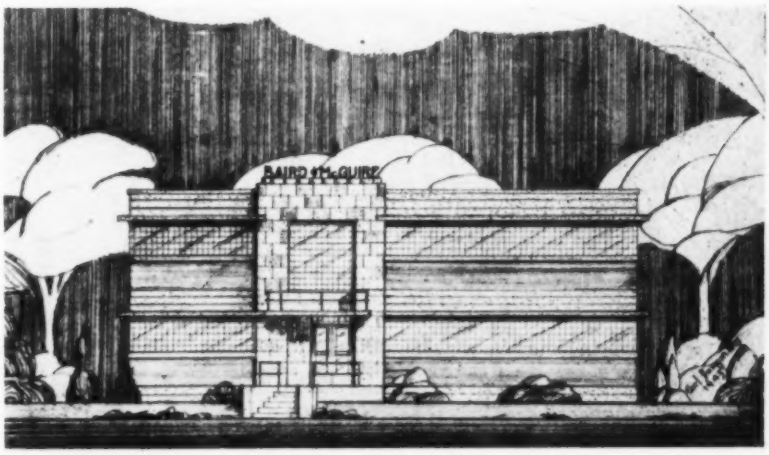
Socony-Vacuum Oil Co., New York, announced a new weed killer recently that is claimed to be successful in destroying weeds among carrots, parsnips and parsley at a cost considerably less than that entailed in hand-pulling methods. The new weed killer is described as a selected petroleum product in spray form that is a thin, water-colored liquid that evaporates, leaving no apparent residue. It is said to impart no taste to the vegetable. About 80 gallons of the liquid are required for each acre and almost any kind of spray apparatus may be used. Slightly better results were reported noted when spraying is conducted on damp days.

S. L. Buschman Dies at 54

Saul L. Buschman, 54, president and director of National Can Corp., New York, died at his home, 336 West End Ave., New York, Sept. 24. He had been associated with National Can Corp. and its predecessors for more than 30 years. He was president of the company for ten years prior to 1937 and vice-president from 1937 to 1941, when he relinquished the vice-presidency to become president of Canonsburg Steel and Iron Works, Canonsburg, Pa. He was re-elected to the presidency of National Can in 1943. During the last war he was chairman of the industrial salvage committee of the sheet metal industry. He is survived by his wife, Mrs. Lena L. Buschman; three brothers, Dr. A. L. Buschman, H. L. Buschman and Nat Buschman; and three sisters, Mrs. L. S. Harris, Mrs. Jack Weinrib and Mrs. Morris Shalita.

New Baird & McGuire Building

Baird & McGuire, Inc., St. Louis, manufacturers of disinfectants, insecticides, and allied products began construction last month of a building to house their research laboratories and offices. The building is to be of fireproof construction and of advanced modern design. Executive and general offices will be on the second floor, while the first floor will house chemical, bacteriological and entomological laboratories. The building will be air-conditioned throughout. Laboratory facilities will be devoted to research towards perfecting better disinfectants and insecticides and also for control of plant production. The new building should be completed late this year, according to the company announcement.



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Easy Polishing **PASTE WAX**

- Moderately priced
- Private label if desired
- A hard drying Wax that buffs easily

Packed in 1, 2, 4, 8 and 30 pound cans
Also
Liquid Rubbing and No-Rubbing Floor Wax.
Welsite—cleans and waxes in one operation.

Mfd. by TWIN CITY SHELLAC CO., Inc.
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INSECTICIDE EXECUTIVE WANTED . . .

BY one of the oldest and most progressive agricultural insecticide manufacturing organizations in the country . . . a man anywhere between 30 and 40 who knows the insecticide field . . . who is a chemical graduate with sales experience . . . who will be able to take over full management of business in a few years . . . and acquire ownership out of profits . . . company located in small city in the East also manufactures other chemical specialties . . . unusual opportunity for a man with the necessary educational and experience qualifications . . . give details, salary, etc., in complete confidence . . . address replies to . . .

BOX No. 205

SOAP & SANITARY CHEMICALS
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TAR ACID OIL
for use in
DISINFECTANTS
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Unusually High in Tar Acids
White-Emulsion and Pink-Emulsion Grades
made from
LOW TEMPERATURE COAL TAR

PITTSBURGH COAL CARBONIZATION CO.
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Producers and Refiners of Coal Tar and Its Products.

Among those gathered to honor J. L. Brenn of Huntington Laboratories, Inc., Huntington, Ind., on his 25th anniversary with the company, was this group at the head table. Also honored for 25 years of service with the company were: George Haite and Frank Friedman, standing behind Mr. Brenn, who is seated at the center of the table, and William Anderson seated at the extreme left and next to Mrs. Brenn. About 80 of the employees were present at the party at which Mr. Brenn was presented with a silver tray engraved with the names of the people in the organization, as well as a cocktail set.

Hercules Offers Combination

Six different types of toxicants, varying according to whether an insecticide spray for home, industrial, farm or other use is desired, are now available from Hercules Powder Co., Wilmington, the company announced early this month. Three of the toxicants are combinations of a type of "Thanite" and DDT. Another is a quality DDT being offered for civilian insecticide sprays for the first time. This DDT, known as "Aerosol DDT," is the DDT used in "Aerosol" bombs since it is said to keep the corrosion rate at a minimum and is soluble in "Freon." The other two toxicants are: "Thanite" and "Thanisol 70."

Donald Starr Joins Penick

Dr. Donald F. Starr has just joined the research department of S. B. Penick & Company. He was formerly on the staff of the Insecticide Division of the Bureau of Entomology and Plant Quarantine at Beltsville, Maryland. Dr. Starr, born and educated at Grand Island, Neb., received advanced degrees in chemistry from Iowa State College, at Ames. For the past 10 years he has been employed as a chemist by the Bureau of Entomology & Plant Quarantine abroad the Department of Agriculture abroad and at the experiment station at Beltsville. He has recently specialized in chemical problems related to methods of formulating and applying DDT. He will continue with similar work at Penick.

Issue Revised Polish Data

Bulletins carrying revised data on morpholine and triethanolamine water-resistant, rubless polishes were issued last month by Carbide and Carbon Chemicals Corp., New York. Formulas are included as well as new methods for preparing these polishes. The information may be had by writing the corporation at 30 E. 42nd St., New York 17, and requesting Form 5681-A.

No Sanitary Supply Convention

The National Sanitary Supply Association has decided to forego its annual October Convention in view of restrictions still governing conventions during the month of October, it was announced recently. No date has been set for a convention, although it is expected that the group will meet as soon as conditions become more normal.

Dr. Dreyfus to Europe

Dr. William Dreyfus, chief chemist of the West Disinfecting Co., Long Island City, N. Y., sailed for Europe on October 8th from New York aboard the U. S. Lines "Argentine." He will land at Havre, France, and then travel to Switzerland where he expects to remain for four or five months. Dr. Dreyfus, widely known as dean of scientific men in the disinfectant and sanitary products field and for many years director of technical affairs for West, was given a farewell party by M. M. Marcuse, chairman of the board, at the company offices on Oct. 4.

Baird & McGuire DDT Bulletin

Baird & McGuire, Inc., Holbrook, Mass., last month issued a special bulletin in the form of a four-page folder on DDT, containing information concerning the sale and use of insecticides containing DDT. There are sections on labeling, as well as descriptions of various products containing DDT made by Baird & McGuire.

Whitmire Issues DDT Report

Whitmire Research Laboratories, St. Louis, recently issued a letter on the use of DDT in household and livestock sprays, along with four reprints of a letter, two articles and an editorial dealing with DDT. With the letter and the reprints, the company has issued a promotion piece in the form of an over-size "telegram" on their "Diro" powder concentrate for agricultural and animal insecticides.

NAIDM MEETS DEC. 3-4

The 32nd annual meeting of the National Association of Insecticide & Disinfectant Manufacturers will be held at the Hotel Commodore, New York, on December 3 and 4. The two-day session of NAIDM will be preceded by a meeting of the Board of Governors and committees on December 2. An attendance of 400 is anticipated.

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This is an exceptionally high quality ingredient for cosmetics. It is available for prompt delivery.

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Joshel Velsicol Purchasing Agent

Velsicol Corp., Chicago, announced the appointment recently of Lloyd M. Joshel as general purchasing agent. Dr. Joshel was associated with the War Production Board from early 1942 until recently. He holds a B.S. degree from the University of Illinois and a Ph.D. from Ohio State University. Subsequent to conducting research at Harvard University under a fellowship from the Finney-Howell Foundation, he was a research chemist for the U. S. Department of Agriculture.

Continental Can Expanding

Continental Can Co., New York, announced plans last month which call for the building of one of the largest can-making plants in the industry near Wierton, W. Va., on property acquired from Wierton Steel Co. The property, approximately 146 acres, forms a wide bulge on the Ohio River a short distance down-stream from the Wierton mills. Thus, the plant has the advantage of being close to one of its main supplies of tin plate. Initial equipment will be brought in from Continental's two Wheeling, W. Va., plants and two others located elsewhere, all four of which will ultimately be closed. The new plant will employ between a thousand and 1500 men and women and will specialize in general line can manufacture.

Continental also announced at the same time that it had begun construction of a $745,000 addition to its Tampa, Fla., plant and is in the process of enlarging can-making operations in a number of other can plants.

Franklin Joins McCormick

D. Murray Franklin, radio and newspaper garden editor, has joined the staff of McCormick & Co., Baltimore, to supervise sales and promotion of the company's garden and household insecticides and plant foods through the hardware, seed and horticultural markets, the company announced recently. In that capacity, Mr. Franklin will act as assistant to Dr. Amos E. Badertscher, director of insecticides and chief entomologist for the company. Mr. Franklin is secretary of the Baltimore Chapter, National Association of Gardeners, and was also organizer of the recently formed Maryland

D. M. FRANKLIN

Rose Society. In addition to his garden advisory counsel over the air and in print, he served as director of the Victory Garden School of the University of Baltimore during the 1943 season.

See New Foreign Insects Here

A prediction that the United States would be invaded by an unprecedented host of new and injurious foreign insects as a result of the war was voiced recently by Dr. Bailey B. Pepper, associate entomologist at New Jersey Agricultural College, New Brunswick, N. J. Already entomologists have recognized dozens of new species that have been carried to the United States by ships returning from abroad, Dr. Pepper said. This development parallels our experience after the first world war, he pointed out, adding that most of the ships were required to carry ballast instead of freight or passengers and this was dumped ashore, generally in haste and without proper inspection.

Pyrethrum Off Import Control

Eleven additional materials, including pyrethrum, were removed from import control Sept. 17, by the War Production Board. The action, taken by revision of General Imports Order M-63, is in accordance with the W.P.B. policy of relaxing import controls as soon as possible, the Board pointed out.

Offer Dispenser Design

Roberts Manufacturing Co., New York, heretofore producing small mechanical products for war purposes, has announced a new consulting, manufacturing and assembling service for mechanical dispensing devices for disinfectants, deodorants, liquid soaps, dishwashing compounds, and also special design insecticide sprayers, applicators, etc. The company states that it is offering to detergent, insecticide and disinfectant manufacturers a consulting engineering service on design and manufacture of dispensing equipment and assembly service. The firm is located at 304 East 23rd St., New York.

Resumes Bacteriological Courses

Resumption of graduate studies in pharmacy, bacteriology and biology at the Philadelphia College of Pharmacy and Science was scheduled for early this fall, Dr. Ivor Griffith, president of the institution announced recently. Early in 1942, the graduate school had to be abandoned because of the war. Letters of inquiry and application should be addressed to the registrar, John E. Kramer, at 43rd St. and Kingsessing Ave., Phila. 4.

Dreyer Appoints Pittsburgh Rep.

P. R. Dreyer, Inc., New York, announced the appointment of B. Ostroff as their representative for Pittsburgh and surrounding territory, as of Sept. 1, 1945. Mr. Ostroff has covered Pennsylvania for many years in the confectionery, pharmaceutical, cosmetic and chemical fields. He will make his headquarters in Pittsburgh.

AEROSOL INSECTICIDES

(*From Page* 126)

Several early civilian buyers of aerosols have reported dissatisfaction with their use. One buyer at least reports that on his first trial at home the valve became stuck and he ended up by spraying his entire house and garage, the dispenser discharging on the "one-shot" principle—cost $3.98 per shot. Much of this sort of thing can certainly build up an unfortunate consumer reaction and seriously limit future market prospects.

Special Offerings of **SOAP MACHINERY** *Completely Rebuilt!*

Newman's BRAND NEW Steel Steam Jacketed SOAP CRUTCHERS Sizes 1,000 to 10,000 lbs.

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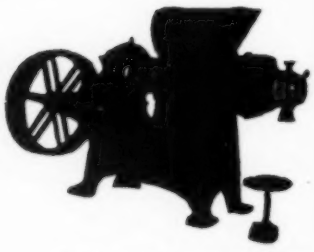
Sizes 10A and 14



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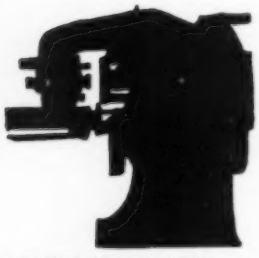

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H-A Automatic and Hand-Power slabbers.
Proctor & Schwartz Bar Soap Dryers.
Blanchard No. 10-A and No. 14 Soap Powder Mills.
J. H. Day Jaw Soap Crusher.
H-A 6, 8 and 10 inch Single Screw Plodders.
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WILL BUY FROM SINGLE ITEMS
TO COMPLETE PLANTS

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Classified Advertising — All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap & Sanitary Chemicals*, 254 West 31st St., New York 1.

Positions Open

Chemist: Graduate with experience in the manufacture of water wax emulsions for floors by a Midwest manufacturer, a town of 9,000. State age, experience. Give references. Address Box 204, care of *Soap & Sanitary Chemicals.*

Soap Maker: Experienced. Upstate New York soap and chemical manufacturer wants a well-trained soap maker or chemical batch processor to take over production and processing responsibility rapidly growing new department vegetable oils, soaps, etc. Reply by letter, giving age, education, experience, salary expectations, availability. Genesee Research Corporation, 571 Lyell Ave., Rochester 6, N. Y.

Sales Manager: A nationally known manufacturer of industrial hand soaps and industrial cleansers located in St. Louis, Mo., wants a Sales Manager of undoubted proven ability equipped by experience to build and train a sales organization to call on industrial plants. Must have a degree from an accredited college. An unequalled opportunity for a really energetic capable man to connect with an established fast growing company. First letter must include snapshot or photograph, age, full detailed data on experience, education and salary expected. Address Box No. 208, care of *Soap & Sanitary Chemicals.*

Research Chemist: Experienced in industrial hygiene and thoroughly capable of improving old and developing new formulas for industrial hand soaps, industrial protective skin creams, metal cleaning compounds and other industrial chemical sanitary specialties. Plant is located in St. Louis, Missouri. Prefer Ph.D. with masters degree from accredited college. This man must have proven ability and it is a splendid opportunity for a really capable energetic man to connect with a well established, nationally advertised growing company. Send snapshot or photograph and in first letter stage age, education, detailed information on experience, salary expected and all other pertinent information. Address Box 209, care of *Soap & Sanitary Chemicals.*

Free Advts. for Veterans

As a service to veterans seeking jobs in the soap, chemical, detergent and sanitary industry, *Soap & Sanitary Chemicals* will accept, without charge, classified advertising from World War II veterans seeking positions. Advertisements should reach this magazine before the 21st of the month preceding month of publication, and should include all essential information. Send them to *Soap & Sanitary Chemicals*, 254 West 31 St., New York 1, N. Y.

Positions Open

Chemist: For progressive Pacific Coast soap company. Give complete details of experience and salary required. Desire man with know how to improve existing formulas and to develop new products. Excellent opportunity for progressive man. Address Box 207, care of *Soap & Sanitary Chemicals.*

Medium Large Soap Company located in Middle West and doing national business is undertaking a post-war development program and requires a graduate chemical engineer with practical and research experience in soap and allied products. This represents a splendid opportunity and you can apply in confidence as our personnel is familiar with this advertisement. State education, experience, and compensation. Address Box 210, care of *Soap & Sanitary Chemicals.*

Salesman Wanted: Established, rapidly growing insecticide manufacturer has exceptional opportunity for several ambitious representatives to sell our well known popular insecticides; also introduce new items containing DDT. Our line of insecticides covers all branches of agriculture, including greenhouse, truck garden and orchard crops. Territories now available to energetic men with sales or growers' experience on drawing account basis plus bonus and expenses. State age and experience fully, and drawing required. Address Box 211, care of *Soap & Sanitary Chemicals.*

Wanted: Experienced practical soap maker capable of supervising all phases laundry and household soap manufacturing. Must have best of references. Salary $5,000 to start Address Box 213, care of *Soap & Sanitary Chemicals.*

Soap Maker Wanted who knows how to manufacture shampoo bases and shampoos. Factory located in New York City. High salary. Give full particulars. Address Box 227, care of *Soap & Sanitary Chemicals.*

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NO POISON • NO BAIT!

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Write for catalog and prices on complete line of Deodorants and Insecticides.

ELKAY PRODUCTS CO.

323-27 West 16th Street New York 11, N. Y.

Positions Wanted

Chemist—Floor Wax experience. An opportunity to run the laboratory in a live, successful organization. An unusual job for an unusual man. Write in confidence to Box No. 214, care of *Soap & Sanitary Chemicals.*

First Class Sales Fromoter needed by nationally known maker of soaps, cleaners, etc. The opportunity of a lifetime for a man with a top performance record in organizing and training a live sales staff, directed at industrial and institutional sales. The man who lands this post will have an assured future. First letter should give fullest details, including expected salary. Write freely—our present staff knows we're running this ad. Address Box 215, care of *Soap & Sanitary Chemicals.*

Soap Maker Wanted: Experienced in manufacture of soap bases and shampoos for beauty trade. Wanted for part time work in New York area. Good salary. Give full record. Address Box 226, care of *Soap & Sanitary Chemicals.*

Technical Service and Development Positions open with company established in specialized industrial chemical fields. Permanent positions with attractive future for young men, age 22 to 32, with bachelor's degree in chemistry or chemical engineering. Previous experience in food processing desirable but not essential. Address Box 229, care of *Soap & Sanitary Chemicals.*

Soap Maker: Established soap company in Southern California. Offers substantial salary and permanent position to experienced soap maker. Please give details of experience. Address Box No. 230, care of *Soap & Sanitary Chemicals.*

Positions Wanted

Chemical Director & Production Chemist: Thirty years continuous experience in production of toilet soap, soap chips, potash liquid soaps, floor-wax emulsions, glycerine, fatty acids, sulfonated oils, wetting agents for textile application, metal treating compounds, coolants for machine tool application, and cutting oils, at present chemical consultant, wants permanent connection as chemical director, production man or chief chemist. Member American Chemical Society. Member of American Oil Chemist's Society. Have been chemical consultant, or special chemist for several of America's best corporations. Can go anywhere. Reply Box 225, care of *Soap & Sanitary Chemicals.*

Positions Wanted

Chemist: Desires new position where experience will be most useful. Twelve years experience in sulfated oils and specialty products for the textile, tanning and cosmetic industries, including wetting agents, detergents, various emulsified oils and waxes, shampoos, cationic products, etc. Age 35 and married. Address Box 203, care of *Soap & Sanitary Chemicals.*

Chemical Engineer—37, possessing proven capabilities backed by over ten years experience in production supervision, cost and planning methods, installation and operation of all types processing packaging equipment. Have handled wide range of products. Desire long range position in production supervision or management. Address Box 216, care of *Soap & Sanitary Chemicals.*

Sales Representation: Seasoned man after three years in War Production Board is returning to Cincinnati to open a resident selling office. Want to represent reputable, aggressive manufacturers or importers, desiring or requiring chemical knowledge to present, sell and service their products. Will accept three non-conflicting lines only. Excellent coverage of Cincinnati area assured. Inquiries confidential. Address Box 217, care of *Soap & Sanitary Chemicals.*

Sanitary Corps Officer: Ph.D. in Chemistry, consultant for ten years on insecticides and disinfectants prior to four years in U. S. Army. Has had three years experience with DDT in this country and abroad. Have had leading oil companies, insecticide and disinfectant manufacturers, and pest control operators as following. Should be released from Army about January 1, 1946. Address Box 218, care of *Soap & Sanitary Chemicals.*

Salesmanager: Have several years experience at employing, training, and managing salesmen in sanitary and industrial chemical field, also considerable experience at selling industrial and public accounts. Address Box 221, care of *Soap & Sanitary Chemicals.*

Miscellaneous

Industrial Firm wants to purchase complete bound volume of *Soap & Sanitary Chemicals* for 1943. Anyone who will sell his complete volume is asked to write Box 212, care of *Soap & Sanitary Chemicals.*

Miscellaneous

Wanted: Fifty barrels Arctic Syntex M. Beads. Address Box No. 206, care of *Soap & Sanitary Chemicals.*

For Sale — 10" Jumbo Plodder; Filters; Pumps, Fillers; Labelers; Mixers; etc. Your surplus equipment wanted. Brill Equipment Company, 225 West 34th Street, New York 1, N. Y.

Wanted: DuPont M.P. 189 and/or Nacconol N.R. Address Box 219, care of *Soap & Sanitary Chemicals.*

Established Cincinnati Firm would be interested in representing concern offer aromatic chemicals, oils or other materials for the soap industry. Address Box 220, care of *Soap & Sanitary Chemicals.*

Floor Brushes: We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Company, Los Angeles, Cal.

Will Purchase Immediately — Pneumatic Packaging Machine, used for chips, powder, cleanser; also dry mixers, chip dryers, crutchers, and automatic soap press. Address Box No. 223, care *Soap & Sanitary Chemicals.*

Insecticides: Old reputable Eastern firm not now in the field wishes to manufacture agricultural insecticides. Wants to contact part time consultants, expert in the production of insecticides, new or old. Address Box 222, care of *Soap & Sanitary Chemicals.*

Wanted: A used Blanchard No. 10A or No. 14 Soap Powder Grinder. Address Box 224, care of *Soap & Sanitary Chemicals.*

Manufacturing Concern would like to add to their line by purchasing going business manufacturing-synthetic chemicals, metallic soaps or similar. Address Box 228, care of *Soap & Sanitary Chemicals.*

Notice: Exclusive territories now available for nationally known dry cleaner's detergent. Can be handled with other lines going to dry cleaners and laundries. Straight commission basis. Write full particulars to Tru-Sheen Corporation, 1558 Oak View Ave., Berkeley 6, Cal.

Miscellaneous

Phila. Janitor & Cleaning Supply Firm established over 12 years desires additional nationally advertised lines. We contact industrial and institutional—wholesale and retail accounts. Fidelity Cleaning Supply Co., 1641 No. 12th St., Philadelphia 22, Pa.

Wanted: Packaging and filling equipment for fine soap powder in regular folding box. Semi-automatic or automatic. Address Box No. 232 care of *Soap & Sanitary Chemicals.*

For Sale: Three Roll water cooled Mills, 12″ x 30″ and 16″ x 40″. 11—Closed stainless steel tanks, 268 gals. each. National Acme Model C20, stainless steel Centrifuges. 800 ft. Ball Bearing Roller Conveyor, 12″ and 15″ widths. Soap Frames; Cutting Tables; Plodders; Stone Mills; Dryers; Chippers; Mixers; Powder Fillers; Grinders, Filter Presses; Kettles; Pumps; etc. Send for latest Bulletin. We buy your surplus equipment for cash. Stein Equipment Co., 426 Broome St., New York 13, N. Y.

Positions Wanted

Chemist: Experienced in the manufacture of waxes, polishes and soaps. Large manufacturer in the metropolitan area, established many years, has an attractive opening, offering bright future to competent man. Address Box No. 231 care of *Soap & Sanitary Chemicals.*

N. Y. Exterminators Elect

Officers and directors were elected by the New York Pest Control Association, at a meeting at the Hotel Commodore, New York, Sept. 11; as follows: president, William O. Buettner, Buettner Pest Control Co., Brooklyn; first vice-president, Sidney Wimmer, Majestic Chemical & Exterminating Co., New York; second vice-president, Stefan Rhodie, Excelsior Exterminating Co., New York; secretary and treasurer, W. J. Parker, W. J. Parker, Inc., New York; assistant secretary and treasurer, Thomas H. Mahon, National Pest Control Association, Brooklyn; directors, E. H. Goldey, Bliss Exterminator Co., New York; Arthur W. O'Connor, Security Exterminating Corp., Brooklyn; and Julius Simon, General Exterminating Corp., Brooklyn.

Goulard & Olena Buy N. J. Site

Goulard & Olena, Inc., manufacturers of a line of insecticides, deodorants, disinfectants, weedkillers and sanitation chemicals, recently acquired a site for enlarged factories and its main office at Skillman, N. J. The plot is occupied with buildings, but another plant of 25,000 square feet is to be built and modernly equipped for producing and packaging. The company plans to add a DDT preparation to its line.

West Redesigns Canadian Plant

West Disinfecting Co., Long Island City, N. Y., have redesigned and enlarged their Montreal factory in order to increase their production efficiency, according to information reaching here recently.

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SAFETY HAND SOAP

(Powdered)

A money-maker for alert jobbers calling on industrial plants and institutions.

★ Hygienically safe—fast and economical

★ Non-abrasive, vegetable oil base

★ Soothing with fine after-effect

★ Tested and approved by millions of safe washups in plants throughout the country

★ Unsurpassed quality and value

★ Free samples available for established jobbers

Other items in the Skotch Products line include dishwashing compounds, medium and heavy duty cleaners, liquid soap concentrate, special formula compounds and powdered soap dispensers.

SKOTCH PRODUCTS CORP.

2710-12 Detroit Ave. Cleveland 13, Ohio

A NIGHTMARE for BUGS!

When Insecticides are Sprayed with the *Motorized*

ADAM A. BREUER'S INSECTICIDE SPRAYER

CONTACT! That's what you get with Breuer's Insecticide Sprayer, motorized to give more penetrating, more effective spraying of insecticides, disinfectants, etc. Unit holds up to 1 gallon of liquid and sprays it 18′ to 20′. Shoots with such force as to penetrate all cracks and crevices. Extensively used.

We do not sell insecticides. Our business is the manufacture of Sprayers. (Patented in U. S. A. and foreign countries.)

BREUER ELECTRIC MFG. CO. 5118 N. RAVENSWOOD AVE. CHICAGO 40, ILL.

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Every effort is made to keep this index free of errors, but no responsibility is assumed for any omissions.

Dreams of Surplus . . .

ALL dreams of surplus stock by sales and production management have not been bad so far, but they are fast beginning to become just that. When the surplus stocks begin to grow, — what then? Now is the time to plan how, when and where to move the results of expanded production when the war boom is over. One of the best time-tested antidotes for surplus stocks is advertising, — regular and consistent advertising planned and carried out before stockpiles grow too large.

If anticipated surplus stocks and production include materials which may be sold in the field of soap products, insecticides, disinfectants, and chemical and allied specialties, we suggest looking into regular advertising in

SOAP *and Sanitary Chemicals*

254 WEST 31st STREET NEW YORK 1

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Tale Ends

WALTER WINCHELL who does his bit on the air for Jergens climbed on the DDT publicity bandwagon last month, adding his "warning" to that of U. S. Public Health Service that if you buy an insect killer containing less than five per cent DDT, you are being gypped. That, gents, make its official!

* * *

Rockford, Illinois, man died after sitting on a toilet which had been sprayed with DDT. Boy, did the newspapers hop in this one! "DDT Kills Man Sitting on Toilet!" But a quiet and unpublicized investigation by a large midwest manufacturer revealed that said man died of stomach ulcers. Nevertheless, imagine the magic of DDT plus a little publicity. It can turn even an old fashioned backhouse into a lethal weapon!

* * *

Story in *The Financial Post* of Toronto, Sept. 29,—tells how Geoff Wood, dynamic president of G. H. Wood & Co., Toronto, started from scratch after returning from overseas a veteran of World War I in 1920 to build the largest sanitary supply business in Canada with branches in 24 cities. He founded G. H. Wood & Co. in 1923. The *Post* article terms him "ebullient." We insist the correct description is "dynamic." He is all that plus. Also just about as well known and well liked in the U. S. as he is all over Canada. His life story has Horatio Alger hanging on the ropes.

* * *

A group of the Potash Soap Division of the Association of American Soap & Glycerine Producers met Oct. 4 at the Vanderbilt Hotel, New York, in conjunction with a committee of the board of the parent association. After a reporter from SOAP was tossed out of the meeting, rumor has it that the "big board" committee gave the potash soapers a neat spanking and spiked some of the latters' plans including one to appeal to Washington for an increase in fat and oil quotas for the potash group. Tough to be just a little step-brother!